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EDITORIALS†

"M" DAY: MEDICAL MOBILIZATION DAY

Action of the American Medical Association in New York.—In New York, at this year's annual session of the American Medical Association, on June 11, the House of Delegates of that national organization pledged the resources of the medical profession in full support of the military forces of the United States. So once again, within the brief span of one-quarter of a century, the making of preparations for a medical mobilization—a new "M" Day—will be experienced by more than one hundred thousand physicians. The offer of professional services, tendered on their behalf by the American Medical Association, will permit the Government to practically "enlist, distribute and regulate them (the medical profession) in time of war."

* * *

Important Rôle of the Medical Profession in Military Forces.—In the World War of 1914-1918 the medical profession rendered yeoman service of great value, and in the plans now under consideration by the Government the whole-hearted aid of physician-citizens is more than ever important. Indeed, it is no exaggeration to say that, in large measure, the efficiency of combat units depends upon the medical personnel of the army, navy and air forces; who, from the standpoint of preventive medicine, are called upon to keep the soldiers healthy and fit for service, through supervision of sanitation and food and other supplies, and also by the application of curative measures to conserve life, and to restore sick and injured soldiers and sailors for their duties as promptly as possible. Because of many factors, the procedures and methods so much in constant use in civil practice take on liberal modifications or radical changes, in order to make them adaptable and useful to military establishments.

* * *

Every Physician Should Be Alert in These Matters.—Since policies already approved by the constituted authorities of our country are bringing into being a military establishment different from any that has ever existed in the United States

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column which follows.

in the past, and because services of the medical profession are of vital importance to the armed forces, it behooves every physician promptly to prepare himself for the part he may be called upon to take in these new responsibilities which face him in both his civil and professional capacities.

The *Journal of the American Medical Association*, in its reports of the proceedings of the national House of Delegates, will give additional information concerning the actions recently taken in New York.* The Council of the California Medical Association meets on June 29, when this and related matters will receive their careful consideration. In the meantime, members of the Association should give careful thought to these issues that, as each week passes by, are thrusting themselves before the people of America with increasing importance and insistence. In all this, the record of the medical profession must not only be above reproach, but of a nature to let every physician take pride therein. Indeed, here is an opportunity that may offer possibilities for the early reestablishment of the prestige of the medical profession, which, in recent years, has been so grossly and unjustly assaulted by forces aligned with certain groups militantly engaged in efforts to inflict Bismarckian compulsory health systems on some of the states of the Union.

CALIFORNIA POSTGRADUATE ACTIVITIES

Agitation for Postgraduate Conference Bringing Results.—During the past several years, the California Medical Association Committee on Postgraduate Activities has striven to enthuse the component county societies with a desire to institute postgraduate conferences in their respective districts, and in 1939 these efforts were rewarded with considerable success. However, the responses received on participation in the postgraduate programs have been far from satisfactory. Gratifying, however, has been the knowledge that county units, whose members have taken up the work in earnest, have become its staunchest supporters. This desire for repeat courses is in accord with the experience of postgraduate committees in other states, and is a tribute to the value of such conferences.

* * *

Basic Problems in Postgraduate Conferences. California covers an extensive geographical area, with population centers scattered in much more irregular fashion than in some of the states east of the Mississippi, where postgraduate courses have been promoted. On that account, transportation expenses of guest speakers are considerably higher, a financial fact that cannot be evaded by either the State or local postgraduate committees.

In the inauguration of clinical conferences, one of the real difficulties is to secure an enthusiastic,

hard-working and able committeeman, or committee, who will accept the responsibility of making local arrangements, and of being constantly on the job until the outlined program has been carried through in successful fashion.

The personnel of the local committee on postgraduate, clinical, or refresher courses, therefore, is an item of importance. The chairman of such a committee must be a physician who is willing to give wholeheartedly of his time and effort, not only to indicate what guest speakers and courses are desired, but also to create real interest in, and attendance at, all meetings.

* * *

Plans for Fall Clinical Conferences Should Be Made.—If, then, postgraduate conferences are to be carried through with success during the coming autumn, plans should be taken up at the present time, so that arrangements mutually satisfactory to all parties interested may be gotten into form.

Component county societies, through their officers or committees on postgraduate work, should feel free to communicate with the headquarters office of the Association, indicating wishes regarding prospective courses to be given during the fall and winter months.

* * *

Postgraduate Conferences in Metropolitan Centers.—Concerning conferences in the cities of San Francisco and Los Angeles, the suggestion has been made that twice a year, in each of the two cities, a one or two-day refresher course might be offered, with clinical work and presentation of patients in the respective county hospitals. Such courses could be conducted under the auspices of the attending staffs of the four medical schools, the two institutions in each city alternating in the giving of spring and fall courses. Such an arrangement—which in modified form has been put in operation elsewhere—creates an opportunity for physicians who have neither the time nor interest to register in the annual sessions of the State Medical Association, and gives such members an opportunity to meet one another and to profit from attendance at the clinical presentations. It has been pointed out that the use of the teaching facilities of county hospitals in this manner will fulfill a need of physicians in both the local metropolitan areas and in adjacent or more distant parts of the State.

The California Medical Association Committee on Postgraduate Activities, which may be addressed through the central office of the Association, at 450 Sutter Street, San Francisco, will be happy to receive comments on any of these matters.

PROPOSED RESEARCH BY THE UNITED STATES PUBLIC HEALTH SERVICE

Legislation Worthy of Approval.—Recently submitted to the United States Senate was a proposed law (S. 3914) which would "impose additional duties upon the United States Public Health

* To carry out the instructions of the House of Delegates, a Committee on "Medical Preparedness" was appointed. The Pacific States are represented thereon by Dr. Charles A. Dukes of Oakland, and Dr. John H. O'Shea of Spokane, Washington. Further information in regard thereto may be found in *The Journal of the American Medical Association*, June 22, 1940, on page 2466.

Service in connection with investigation and control of pneumonia, influenza and the common cold."

The printed report of recent hearings before a subcommittee of the Committee on Education and Labor of the United States Senate, under the chairmanship of Senator Claude Pepper of Florida, gives the testimony submitted by a group of physicians who had been invited to appear and express their opinions: (1) on the need of the studies referred to; (2) the amount of funds to be allotted therefor; and (3) as to whether the work could be carried on to best advantage as one of the investigation activities of the United States Public Health Service.

Among the well-known physicians who appeared before the Subcommittee were the following: Dr. Thomas Parran, Surgeon-General, United States Public Health Service; Dr. Walter Bierring, Commissioner of Health, State of Iowa; Dr. John J. Shaw, Secretary of Health, Commonwealth of Pennsylvania; Dr. H. A. Holle, National Institute of Health; Dr. Russell L. Cecil, Professor of Clinical Medicine, Cornell University Medical College of New York City; Dr. Jesse M. Bullock, Clinical Professor of Medicine, New York College of Medicine; Dr. Julien E. Benjamin, Associate Professor of Medicine, University of Cincinnati.

* * *

Appropriation Would Be for \$3,000,000.—For the fiscal year ending June 30, 1941, S. 3914 would appropriate a sum, not to exceed \$3,000,000. At the present time, the United States Public Health Service has available for annual use, in the studies contemplated, not more than \$35,000—an amount totally inadequate, when the losses to the country, which result from illness and deaths that could be prevented, are taken into consideration.

The report also gives interesting information on not only the three diseases immediately concerned, but also on other research activities of the United States Public Health Service, as well as those of its sponsored subsidiary, the National Institute of Health. Perusal of the minutes of the hearings is of special interest because of the pertinent queries put by Senator Pepper, and of the placing in the record of certain facts concerning the influenza pandemics of 1888 and 1918; the pneumonia control work with sera in the states of Massachusetts, New York, and Pennsylvania; and the newer procedures in chemotherapy, with special relation to sulfanilamide and sulfapyridin.

* * *

Mortality Rates.—The pneumonia and influenza death rates per one hundred thousand are given for the different states, Arizona having a rate of 199.8, as against California's 82.7. Influenza is counted with pneumonia because "an influenza death is a pneumonia death."

In a table on the incidence of pneumonia (all forms) and influenza, California was credited with 4,281 deaths in 1938, and 3,298 in 1939, the ten-year average, period of 1929-38, being 5,006. The death rate per 100,000 population for the five-year

average, 1934-38, was 82.7. In the influenza pandemic of 1918 the death rate from that disease in the United States rose from the then average of about one hundred fifty per 100,000 to almost six hundred.

* * *

Manner in Which the Studies Would Be Made.—Surgeon-General Parran, in answering the question on what he thought the proposed law would do, stated:

In the first place, the Public Health Service has had long experience in dealing with the states in regard to a number of health problems, both the general problems of health, under Title VI of the Social Security Act, the recent Venereal Disease Control Act, and, to a small extent, the National Cancer Institute Act. We already have the machinery to carry out this additional grant-in-aid program. Very little additional overhead would be necessary, because we have our district officers, and we have representatives in the several parts of the country who are already available to help carry out this program. We need some additional technical people, of course, people who have the technical ability of Doctor Holle, Doctor Ruemrich, and others who were here this morning. The overhead is already taken care of. That is the first point. The machinery for dealing with the states in comparable matters has already been set up. I will state if this bill is enacted we will call a conference of the State health officers to discuss with them the provisions of the regulations which are authorized under the bill. That procedure is traditional in any dealing with the State authorities, so that there is mutual agreement as to the weight which should be given to each of the several factors mentioned in the bill.

The bill provides that the funds should be allotted on the basis of population, the extent of the pneumonia problem, which is determined by the death rate, and the financial needs of the respective states. So the yardstick is already created in dealing with such a matter as this. The only question is the relative weight to be given to each of the three problems.

* * *

How the Venereal Disease Program Has Been Carried On.—Concerning the venereal disease program and the extent to which different commonwealths have responded with State funds, Doctor Parran went on to say:

Doctor Parran: While I am not entirely satisfied with the progress we have made, the program is well ahead of schedule. In general, the states have done their part. They have put up more than \$2.00 for every dollar of Federal money which has been allotted to them. The appropriation this year is \$5,000,000. Of that, about a half-million is used by the Public Health Service for its research and administration, the remainder has been allotted to the states.

Senator Pepper: You set up certain standards of matching. I think you said on an average they put up \$2.00 to \$1.00 of Federal money.

Doctor Parran: Yes. The states in turn allot the money to the localities for the establishment of the treatment, the diagnosis and treatment facilities. In a comparable way under this bill states would allot the money to local departments of health, to be used in the ways that Doctor Holle has described. There is a basic consistency between the provisions of this bill and those of the Venereal Disease Act in that in each case an important objective is to put better tools in the hands of the practicing physician. In that connection, Senator Murray, that action supplements the provisions of the pending hospital bill under which community hospitals would be built.

Here is another example of enabling doctors to practice scientific medicine, by supplying them with the costly laboratory service, costly drugs and serum for their poor patients, and also the provision of nursing care, because so often the difference between life and death of the pneumonia patient depends on good nursing.

Medical Profession Has Given Full Coöperation.—The following should, likewise, be of interest:

Senator Pepper: Doctor, what has been the attitude of the medical profession toward the cancer and venereal disease programs?

Doctor Parran: There has been the fullest possible coöperation in respect to both of them, and, with your permission, I should like to put into the record a quotation from an address by the President-Elect of the American Medical Association, given in Chicago at the National Social Hygiene meeting, February, 1940, in which he expressed that coöperation, and also pledged coöperation for the President's hospital construction program.

Senator Pepper: We would be glad to have the statement put into the record. (The statement referred to is as follows):

In the *Journal of Social Hygiene*, Volume 26, No. 3, March, 1940, speaking of the venereal disease control program, Dr. Van Etten said: "I can assure him (Doctor Parran) that the American Medical Association will be heartily coöperative, because it cherishes the same ideals."

In reference to pending hospital legislation, Dr. Van Etten stated: "The new proposal of the President may carry new hospitals and laboratory facilities to places where they are needed, and prove a great source of help in regions where the progress of social diseases are unchecked and untreated. The President should receive the hearty support of all physicians in this new project."

* * *

On What It Is Believed the Proposed Law Would Accomplish.—These comments may be closed with a quotation regarding the type of service to be rendered through the proposed law:

Senator Pepper: State what kind of program could be put into effect in the country if this bill were passed.

What results do you think, based upon your previous experience and knowledge, would be obtainable with this program in effect?

Doctor Holle: I believe it calls for \$3,000,000 for the first fiscal year. It would enable every state to establish a pneumonia control program, it would enable them to have trained personnel—one or more—medical men trained in pneumonia, laboratory people trained in pneumonia who would go around in the state and assist the private laboratories to develop high standards, or to keep their standards of diagnosis, through laboratory work in the pneumonia field, at a very high level through check testing and other technical assistance. It would enable the physician to receive, for every pneumonia case, at least, sulfapyridine. I cannot give you the figures on whether it would be enough to supply serum in every case in which it was needed, or whether it would be enough to provide hospitalization for any of the pneumonia cases or not; but at least you could give them the minimum essentials of sulfapyridine and perhaps serum, and laboratory services, and we hope limited amounts of nursing services; visits of public health nurses into the homes to assist the people by instructing them under the doctor's direction on how to take care of the patient, how to take the specimens, how to administer the drug to the patient under the doctor's direction; principally, to strengthen the laboratories, to subsidize private laboratories for having done work on these patients in areas where no public laboratory exists. It is not right for the doctor continually to call upon the private laboratory to do work free when there are no funds available for reimbursing them.

* * *

The brochure of sixty-two pages, containing the report referred to, bears the number 231,749, in publications of the United States Government Printing Office, Washington. If request be made to the Honorable Claude Pepper, United States Senator from Florida, or to the United States Government Printing Office, stating the number of the report, a copy will probably be sent to any physician so applying.

ON VARIOUS TOPICS

American Medical Association Will Meet in San Francisco in 1943.—In New York, on June 11, the House of Delegates of the American Medical Association, by a vote of 94 to 50, accepted the invitation of the California Medical Association to hold the American Medical Association session of the year 1943 in San Francisco. California entered the race at a rather late day, but in spite of that handicap was successful over Detroit and St. Louis; and, appreciating the compliment, Californians will do their utmost to make the meeting measure up to the best standards of the past.

* * *

Reapportionment of American Medical Association House of Delegates.—The increasing membership of the California Medical Association will permit California hereafter to be represented in the American Medical Association House of Delegates by eight instead of seven delegates. New York, Pennsylvania, and Illinois are the three states which have larger delegations.

* * *

Hearings on the American Medical Association Indictments.—It is rather curious that the officers of the American Medical Association should have been called upon to immediately leave the New York annual session on June 14 to personally appear in Washington, D. C., and submit their pleas in the suits sponsored by the Government, in connection with its contention that the Sherman anti-trust law had been violated in the Group Health Association controversy. Keeping in mind some past activities having to do with this suit, one is almost tempted to think that the date of the hearing was set with plans aforesaid.

* * *

California Physicians' Service.—California Medical Association's solution of the problem of providing medical service to meet the needs of citizens belonging to certain income bracket groups, is given expression in California Physicians' Service, a nonprofit corporation whose professional membership is made up almost entirely of physicians who are members of the State Medical Association.

In this issue, on page 37, is a progress report that should be read by all California Medical Association members. In connection therewith, time may also be taken to read the discussion on Resolution No. 7, in the June issue of CALIFORNIA AND WESTERN MEDICINE (page 283), and other comment on acquisition and related problems of California Physicians' Service (page 291), as presented at the annual session in Coronado.

* * *

"God Bless America and Preserve Our Priceless Heritage."—Such was the half-page illuminated caption in a full two-page illustrated advertisement by the "National Physicians Committee for the Extension of Medical Service,"* appear-

*Articles concerning National Physicians Committee have appeared in former issues of CALIFORNIA AND WESTERN MEDICINE, as follows: In December 1939, pages 358 and 360 (Achilles Heel); and March 1940, page 120 (Minute Men).

ing on pages 62-63 of the *Saturday Evening Post*, in its issue of June 22, 1940. Physicians who have not seen the above announcement would do well to secure a copy of the publication. The statement of the National Physicians Committee (N. P. C.) was presented in excellent manner, and the medical profession of the United States is under obligation for this splendid expression of educational endeavor through which an important message was called to the attention of the people of the United States. Especially physicians who have felt that the profession has been laggard in presenting its side of current medical service issues should read the National Physicians Committee advertisement. At its bottom was printed, "Contributions from physicians from nearly every county of every state paid for this advertisement."

* * *

Medical Legislation on the November Ballot.

Compulsory Health Law: Present signs indicate that the much-discussed compulsory health legislation will not be submitted to the voters of California at the coming state election in November.[†] That does not mean, however, that it may not be thrust to the front at the next session of the Legislature, which will convene in Sacramento in January, 1941. Members of the medical profession, therefore, should keep in mind that good citizenship necessitates interest concerning persons who are candidates as State senators or assemblymen; for it is the State legislators who will sit in judgment on these important proposed statutes. Hence, support should be given only to such nominees as are known to have sound views on public health needs.

Basic Science Law: Concerning a basic science initiative, some of the difficulties in connection therewith were indicated in the discussions at meetings of the House of Delegates at Coronado, and recorded in the session minutes. (See June issue of *CALIFORNIA AND WESTERN MEDICINE*, on page 286.) The proposed legislation remains a subject of study, and will be sure to receive the earnest attention of the Council.

* * *

Cancer Exhibit at Golden Gate Exposition.—

The exhibit planned by the California Medical Association Cancer Commission and displayed last year at the Golden Gate International Exposition has been reinstalled for the 1940 Fair, where it is housed in the Science Building. Members of the Association may wish to inspect the charts; and suggestions for any improvements will be welcome.

* * *

Wagner-George Hospital Construction Bill

(S. 3230).—The much-debated federal measure known as the Wagner-George Hospital Construction Bill, which was sponsored by President Roosevelt, has received the favorable vote of the Senate and, as revised, is now before the House of Representatives for consideration. Fortunately, some of

the defects so evident in the original draft have been remedied. In its present form, the proposed law would allot to the United States Public Health Service, for a period of six years, beginning June 30, 1941, an annual appropriation of \$10,000,000, said sum to be available not only for construction, but for maintenance of the hospitals authorized for erection, or for grants-in-aid.

Under Plan I of the measure, a local community, through the State Director of Public Health, would file its application, showing therein why a real need for a hospital exists in its area, and guaranteeing both that means would be provided to make the facilities widely available, and also that equipment and facilities would be maintained according to the standards laid down by the governmental authorities.

The hospital would be leased to the community for a period of sixty consecutive months, and at the end of that period the property would be transferred to the lessees.

Plan II would be of a type of grant-in-aid, the Federal allocation to a community to vary from 25 to 90 per cent of the total cost of the hospital to be constructed. In these grant-in-aid hospitals, the title would be vested in the community from the beginning.

If the proposed law receives the approval of the House of Representatives and the signature of President Roosevelt, it will be possible for certain communities to make available for themselves hospital facilities now lacking and needed.

* * *

Dr. Hugh Cabot's "The Patient's Dilemma."

This is the title of a volume from the pen of a well-known physician which has been the subject of much discussion, some of the author's positive statements receiving considerable criticism. It may be of interest, therefore, to readers to note the reactions aroused through perusal of Cabot's book, as evidenced in comments in recent medical publications.

An editorial in the *North Carolina Medical Journal* of June, 1940, for example, has this:

In his recent book, *The Patient's Dilemma*, Dr. Hugh Cabot quotes the following statement from Dr. Morris Fishbein: "Obviously, 85 per cent of the diseases for which patients consult doctors are of the type which the general practitioner can handle with the amount of equipment that he can carry in a handbag." Doctor Cabot's comment is, "We shall, I think, be on sound ground in asserting that this statement never was true and that it is even less true today. . . . I am unaware of any evidence . . . acceptable to any scientific body which would support Doctor Fishbein's allegation."

In an effort to find out which of these views was correct, five Winston-Salem, North Carolina, medical men tabulated an average of two hundred consecutive cases each. Of the one thousand patients thus reviewed, 848—or 84.8 per cent—had been cared for without any other equipment than the contents of a handbag. A modern doctor's handbag, be it remembered, contains at least a blood pressure apparatus, a stethoscope, a hypodermic syringe, an otoscope, an ophthalmoscope, a transillumination light, a blood counting apparatus, glass slides, a hemoglobin scale, a pleximeter, tongue depressors, Wassermann tubes, culture tubes, and a few other odds and ends. . . .

The lowest proportion of patients cared for unaided by an individual doctor was 82 per cent; the highest, 89. The

[†] Since this was written, press dispatches have stated that a compulsory health initiative would not have a place on the November, 1940, ballot.

average of 84.8 per cent is certainly close enough to 85 to be acceptable to most scientific bodies as supporting Doctor Fishbein's statement.

* * *

And in *The Journal of the Maine Medical Association* of June, Dr. R. Bliss of Bluehill writes:

Passing strange and entirely regrettable is the inclination of the retired physician to wield the devastating pen when nearly every country in the world offers such opportunities for the less deadly sword. Dr. Hugh Cabot, retired from a life profoundly influenced by the Mayo Clinic, has felt constrained to write a book, "The Patient's Dilemma." . . .

As might be expected, the author's experience and environment have led him to exalt the group clinic which he knows so well and to charge the physicians of small villages, of whom he obviously knows nothing, with abysmal ignorance. . . .

When the country physician calls upon a middle-aged patient who has never been clinic serviced, he immediately forwards the patient to the nearest clinic where a group of specialists mill him through and give to him, or sell to him, "a good article" of medical care. The physicians of the small towns and villages will be expected to attend short, simple illnesses and send all others to the regional clinic. These country doctors are to be keen, well educated young men who, by frequent courses in the great clinical centers, continue to be good diagnosticians surcharged with good old country doctor qualities and yet content, year after year, to act in their capacity as transfer agents for the clinical centers. Just what vitamin is to be fed them to produce this bovine contentment is not revealed in Doctor Cabot's book. . . .

That an able surgeon, stepping down from a trail pure and white with notable achievement, should deliberately seek to blacken and smear the road over which the next generation of young men must travel, at least illustrates another way of bearing up under the strain of retirement.

No penalty is severe enough for the unclean bird who literally befouls his own nest.

* * *

However, snap judgment should not be made. Physicians who are interested in these problems may well take the time to read Doctor Cabot's book, and then form their own conclusions concerning his breadth of view and the value of his criticisms and suggestions.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 36.

EDITORIAL COMMENT†

TOXIN FROM SUPERFICIAL BURNS

Wense,¹ of the Institute for Experimental Pathology in the University of Innsbruck, currently reports that animals immune to histamin are not resistant to the autotoxin produced by superficial burns. From this he concludes that histamin plays

but a minor rôle in the autointoxication following local heat injury.

The shock and early death which follow superficial burns are presumed to be due to autointoxication. This concept has apparently been long established. Aqueous extracts of skin from burned areas are highly toxic for experimental animals. Transplantations of skin and establishment of circulation between normal animals and those superficially burned transfer the toxin. Earlier attempts to identify the toxic agent, however, led to the generally accepted conclusion that the toxic factor is probably not a heat-denatured normal protein, but some fairly simple, nonantigenic protein split product. Attention was soon centered on histamin as the probable factor, this substance being present in relatively large amounts in burned skin and in the blood of experimentally burned animals.

The fact that laboratory animals can be rendered highly refractory, or relatively "immune," to histamin, suggested to Wense a practical method of testing this conclusion. In his experiments guinea pigs were given daily subcutaneous injections of histamin for a period of about two weeks, at the end of which time the animals were able to tolerate forty to sixty times the usual lethal dose of histamin. These histamin-refractory animals were then tested for their relative susceptibility to superficial burns. Large skin areas of normal control animals under ether anesthesia were dipped for two to two and one-half minutes into hot water (80 degrees centigrade). Animals with this degree of scalding usually developed profound shock, from which death resulted in about two hours. A shorter immersion (one-half to one minute) usually caused little or no shock, but death usually resulted in from one to three days. No appreciable changes in this normal symptomatology or fatality rates were observed in parallel test with the guinea pigs immune to histamin. Indeed, the histamin-immune animals seemed slightly more susceptible to superficial burns than the normal controls. The conclusion seems inevitable that histamin is not the essential autotoxic factor.

Wense confirmed this conclusion by therapeutic tests with the histamin-destroying intestinal ferment ("torantil") recently isolated by European biochemists.² This intestinal enzyme injected intravenously will protect laboratory animals from multilethal doses of histamin. In Wense's hand, however, the enzyme had no demonstrable therapeutic effect in the autointoxication following superficial burns.

P. O. Box 51.

W. H. MANWARING,
Stanford University.

HAZARDS OF PATCH TESTING

Patch tests, to be of value, must be properly interpreted. When considered in the light of the patient's history, however, such tests are of prime importance in the study of both contact dermatitis

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹ Wense, Theodore: *Zeitschr. f. Immunitätsforsch.*, 97:100 (Nov.), 1939.

² Rigler, R.: *Münch. med. Wschr.*, 1:15, 1936.

and exfoliative dermatitis. Such tests are of little or no value in other types of cutaneous manifestations. It must be remembered, though, that the application of an allergen or hapten to the skin is not without danger.

Primary irritants, as exemplified by undiluted gasoline, may produce an area of necrosis leading to a sluggishly healing ulcer and unsightly scarring. The victim of such a reaction is seldom grateful to the physician applying such a test. For this reason, articles such as that of Rostenberg and Sulzberger,¹ giving the strengths of substances which are non-irritating, should be in the possession of every practitioner who performs skin tests.

A second type of disconcerting reaction is the generalization of a previously localized eruption following the application of a patch test. This is especially true in preëxfoliative arsenical dermatitis,² where a mild pruritic eczematoid patch may assume the alarming aspect of a true edematous desquamative exanthem. In one case, in my experience, the application of a 10 per cent cocaine ointment produced a generalized morbilliform eruption.

Patch testing may lead to sensitization of previously uninvolved skin. A healed patch test on the arm, for instance, may exhibit activity in recurrent eruptions which were previously confined to the hands.

The fourth, and most serious complication, is the development of constitutional symptoms following the application of a contact test. In one case under my care, the application of a nicotine-containing plant spray to the unbroken skin of the patient's back resulted in a severe attack of nausea and vomiting, occurring within fifteen minutes after the test had been put on. Despite the immediate removal of the test, and the thorough cleansing of the patient's back, this episode lasted for more than two hours. It was accompanied by marked pallor. The patient, who was sixty years of age, had never used tobacco in any form during his lifetime.

Therefore, it is obvious that one should consider all these factors before adopting a routine of indiscriminate patch testing of all patients exhibiting sensitization dermatoses.

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ERVIN EPSTEIN,
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METHOD OF TREATMENT OF TRICHOMONAS VAGINALIS VAGINITIS

It is not the purpose of this brief paper to consider whether the trichomonad is a contaminant, is in symbiosis, or is the cause of the typical vaginitis in which it is found, but to report a method of treatment. This particular technique of treatment, in the hands of certain of my associates and myself, has uniformly produced prompt and oftentimes spectacular cure. In fact, one or two applications will not infrequently produce apparent

cure in cases which have for months stubbornly resisted many other methods and agents of treatment. In addition, it is simple, not costly, and lacks the discomfort to the patient of certain of the more drastic cleansing procedures. No local or general evidences of toxic effect have been noted, as have occasionally been reported from other materials.

An ordinary bivalve speculum is used and the vault of the vagina exposed. All easily removed mucus and secretion are wiped free with cotton swabs. Caroid powder is then applied by applicators to the cervical canal and upper vagina. It is used liberally, and sufficient time is allowed to elapse for all of the tenacious secretion and mucus to be liquefied or freed. Ordinarily one or two minutes are adequate. All this residue of powder and liquefied secretion is then carefully wiped out of the cervical canal and vagina, rotating the speculum as necessary. This operation, properly carried out, leaves the cervical and vaginal mucosa clean and dry.

The treatment is then completed by the application of 20 per cent aqueous solution of mercurochrome. Lesser concentrations of this drug do not have as rapid an effect, and do not leave the vaginal tract as dry. A tightly wound applicator, saturated in this solution, is first placed in the cervical canal and is allowed to remain *in situ* until the treatment is completed. The entire cervix and vagina are then carefully painted with the mercurochrome solution, rotating the speculum as needed to cover every portion of the surface. The speculum is withdrawn and finally the applicator in the cervix removed. Inasmuch as the mercurochrome solution stains clothing badly, it is wise to place a cotton plug or tampon in the lower vagina after the treatment.

These patients are usually treated twice weekly; and, while one treatment will frequently produce an apparent cure, we feel it is wise to use three or four applications. We then follow with one treatment after each menstrual period for two or three months, which greatly reduces the possibility of recurrence. The patients who have recurrences are further advised. Careful instruction is given in the method of cleansing after defecation; they are prohibited from using the standard sanitary napkin and are instructed to use menstrual tampons, and, if the vulvar and perineal hair is profuse, they are advised to keep the area shaved. Recurrence, in spite of these precautions, necessitates investigation of the sexual partner for the possibility of a trichomonas infection of the urethra or prostate.

SUMMARY

1. A simple and extremely efficacious method of treatment of trichomoniasis is presented.
2. The prevention of recurrences is briefly discussed.

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¹ Rostenberg, Adolph, Jr., and Sulzberger, Marion B.: A List of Substances for Patch-Testing and the Concentrations to Be Employed, *J. Invest. Dermat.*, 2:93, (June), 1939.

² Epstein, Ervin: Sensitivity to Both Trivalent and Pentavalent Arsenicals, *Arch. Dermat. and Syph.*, 36:964 (Nov.), 1937.

There is no reason for tuberculosis to be five times more prevalent in some communities than it is in others.—Thomas Parran, M. D., U. S. P. H. S.

ORIGINAL ARTICLES

BIOLOGICAL ENGINEERS*

By RAY LYMAN WILBUR, M. D.
Stanford University

TWO great streams of life—those of the plant and the animal world—surround and engulf man, who is but a part of them. Without the sacred power of reproduction, life in its relationship to time would be represented by the California redwood, or perhaps some of the molluscs of the deep sea. To control reproduction gives control of life. Much of our modern agriculture, with its consequent enlarged food supply that has increased human beings by billions, comes from invention and discovery and a better understanding of life processes and of reproduction. Civilized man is dealing in new and artificial ways with these life processes.

The physician is becoming a biological engineer serving the individual and society in many fresh and some rather startling ways. He can no longer be symbolized by pills and scalpels. His range of activity has become world-wide. His power for good or evil has become of vast significance. While the civilized world is witnessing various more or less effective efforts to control human fertilization, it is not beyond the possibilities that the scientist physician may actually acquire domination over human reproduction through new knowledge of hormones. This power could be used to cut off all of the weak channels from which our poorest stock comes; but it could also be used to the destruction of the race. We have no guarantees of a future free from extinction. The dinosaur did well for millions of years. At any rate we are in for a period of adjustment to reduced birth rates and to a sharp rise in the percentage of the old in our population.

The amazing advance in the application of chemistry and physics to biological processes is revolutionizing medicine in these very days in which we live. Within fifty years we have seen an almost complete transformation in the activities of the medical practitioner. Fifty years ago his functions were largely determined by observation and experience, and the books from which he got his education had much to do with description and comparatively little with experimentation. In half a century, experimentation and analysis have been brought in at such a rapid rate that at times we almost forget that over the centuries medicine was largely based upon shrewd observation and the accumulation and digestion of past experiences.

This development in medicine has run parallel to similar changes in that broad field of science which we have called biology. The practice of medicine is a form of applied biology. One can hardly fail to see life as a resultant of a combination of certain chemical substances that have some magic turn that gives them the power of change and reproduction. As our knowledge of the different

forms of life about us, including bacteria and viruses as well as insects and protozoa, increases, our skill in controlling the diseases caused by parasites has grown. In our battle against them we have sought for any means that would destroy them either in or outside of the body. In chemistry we have at times found the ideal procedure. The development of remedies such as quinine for malaria and salvarsan or its derivatives for syphilis, are good examples. We have vastly enlarged our capacity for the control of parasites through our knowledge of immunity and our studies of the abilities of living organisms to interfere with the growth of other living things within their own structure. In recent years physics has been added to chemistry as a fundamental part of medical research and care. Roentgen rays, radium emanations, and other forms of energy displaying themselves as waves, have been brought into day to day use.

Certainly we need to know as much as possible not only about the various forms of life from which we derive our food and growth, but especially those forms that live in or on us and cause disease. A knowledge of their biology has become vital. We are now treating the unicellular organisms in our laboratories just the way we do chemical substances in order to determine all of their possible reactions to external influence and chemical agents. In this way we may gain new points of view of value to medicine.

In our studies of the chemistry of the body and the cells which make it up, we will have to include now the use in considerable volume, by large numbers of our people, of alcohol, various anesthetics and analgesic drugs, narcotics, hypnotics, caffeine, nicotin, and in various parts of the world, betel nut and cocaine. With the help of advertising, we are spreading the use of many of these drugs over the whole human family without any very clear idea of just what may be the ultimate effect. It may be all right from the standpoint of sequence to advertise the use of some special coffee and a peculiarly fine "Slumber Right" mattress, but the combination may not be an ideal one from the standpoint of sound sleep.

We are just beginning to grasp some of the implications, chemical and otherwise, of fatigue—to realize that fatigue may involve some parts of the body more than others, and that mass fatigue of a people may have a good deal to do with infections and certainly a great deal to do with human reactions to unexpected strain. We have found some short cuts to relieving fatigue by the use of glucose solutions, and have found some drugs that will stimulate the nervous system and put it into different gear for a short time. We are learning something of the chemistry of fatigue.

The days have grown longer for our youth. For untold generations our relationships to light have been well established by the places in which we have happened to live and by the rising and setting of the sun. Now, with artificial light so widespread that sports can be conducted at night, with night turned into day in many ways, we may be developing profound effects from a biological standpoint

* Guest speaker's address. Given at the second general meeting of the California Medical Association at its sixty-ninth annual session, Coronado, May 6-9, 1940.

which will appear later. Fatigue, longer periods of light, widespread use of drugs, may counterbalance the advantages we have from our new knowledge of nutrition.

Nutrition and diet can no longer be associated with certain fads and fancies, but must be viewed in a realistic manner. An enormous amount of time has been spent by engineers upon the study of the fuels which provide the power for mechanical engines. The human engine needs even greater care. If a few decades ago somebody had proposed to sell concentrated milk that had been passed through certain waves of radiation, it would certainly have looked like a quack affair. We have discovered that there are various rays that can be developed by purely artificial procedures that are of great importance in nutrition. Physics has compelled us to think in entirely new therapeutic terms. Waves, too, have given us new knowledge of living human anatomy and through the roentgen ray have changed all of our procedures in the matter of injuries, have enormously increased our capacity for diagnosis and reduced the necessity for the elaborate studies of anatomy by dissection for those physicians who do not plan to operate.

The biology of the vitamins, the relationship of the sex organs and various enzymes, the oxidation reduction phenomena, are apparently of great significance; but we know but little about them and we need to be much better informed as to the effect of the emotions upon the glandular system of the body, particularly the various endocrine effects that we know have a profound effect upon our physiology.

In our biological engineering we will have to pay careful attention to the differences in the human engine during the period of babyhood, childhood, adolescence, maturity, and old age. With the constantly increasing percentages of elderly people in the population, and with the steady improvement of preventive medicine, more and more of the doctor's time will be taken up by those who have started down hill, from the standpoint of body perfection.

New perils have come into the world with the great developments in intercommunication and with the widened influence of single individuals. The state of the blood vessels in the brain of a president, the percentage of sugar in the blood of a prime minister, the height of blood pressure in a general, may have a profound influence upon decisions involving millions, if not hundreds of millions, of people. Beyond this, the mental state of those who have achieved, acquired or have been given leadership may be of profound importance. There is a great deal that we will have to learn not only about growth, but about decline.

The physician who is to act as a biological engineer has not only the problem of living with his own central nervous system, but also that of dealing with others who have not found it easy to carry around a brain and a spinal cord with all of their connections and associations. Sometimes the doctor is able by various devices to make suggestions, perhaps supply vitamins or bring about a process that makes the human engine work a little better,

just as certain chemical constituents take the knock out of gasoline.

With the distribution of citrus fruits and other vitamin containing foods over many parts of the world throughout the year to growing youth, new possibilities of health are available in all climates. If accompanied by a right diet there may result a considerable increase in the initiative of individuals and perhaps of whole peoples. Anthropologists have maintained that the right diet has had a great deal to do with the development of man and that his capacity to go ahead has come because the right diet made him feel right to do right, and also gave him the ability to start something—some of the things he started not being perhaps worth while, but nevertheless a part of the constant flux and change about us.

The biological engineer's greatest responsibilities come where groups of individuals are handled—in a factory, in a community, or in a nation. Industrial hygiene has taken on new significance and has relationships particularly to chemistry and physics that are yet largely undisclosed. With the constant creation of new substances brought into industry it is inevitable that new problems will arise from the effects of these substances, either immediate or remote, upon living tissue.

Certainly the physician must think in the terms of biology and must know the physiology of the body and all of the cells making it up if he is to guide the human being through his difficulties. While this body of ours is a satisfactory engine in the ordinary normal existing environment, the rapid changes that we are making in that environment may materially change its reactions.

If this picture that I have given is not an exaggerated one, and if there has been this constant change in medical practice from day to day, ought we not to go deliberately at the preparation of the doctor on somewhat different lines than those that have come to us through tradition and an experience which, to say the least, was quite incomplete from the standpoint of modern science? It seems more important than ever before for the young doctor to have a broad basic training and not to specialize too soon in the field of medicine. The doctor's relationships to the social sciences, to economics, to the health of officials, to the operation of armies, and to industry make it important for him to understand the principles of economics, to have a knowledge of history, to know much of psychology, and even to be interested in politics. I can think of only three subjects that *need* to be a part of the early training of the physician, and these are chemistry, physics, and biology. Not too much of any one of these three should be required if by that requirement we interfere with the broader training of which I have spoken. The medical course itself should be undergoing constant change. It needs to recognize the importance of the work in biophysics and biochemistry, to eliminate a lot of the old forms of therapeutics, and to discard as rapidly as possible unessential historical items in such fields as bacteriology, pharmacology, physiology, medicine, and surgery. It should reserve for the hospital years practically everything that

has to do with the specialist, but should concentrate upon a thorough training in physiology, pathology, medicine, surgery, public health, and preventive medicine. We can no longer view our medical knowledge as divided into segments, each one of which can be carefully delineated from the others. We have to think of our factual knowledge as a constantly flowing stream which shows certain trends and which we cannot lock up into individual compartments or keep in different pigeonholes. It seems to me that a special effort should be made to train students on the activities of the central nervous system. This may be an intricate and difficult subject, but it is one that can no longer be handled well except by those who have thorough preparation. The very processes by which we have prolonged life and built up modern society have given us more and more responsibility for the care of those with inadequate or damaged brains, who would have succumbed under the harsher conditions of an earlier period.

I have tried to present the physician as a biologist who is using his biology to help steer and handle the human engine. There is no other creation so significant as that of the human body. The doctor needs to know all of its parts and all of its functions, but, above, all, he needs to understand just what human beings are and their unique and individual responsibility to what we call "life." We are inclined to pay too much attention to what we call "success in life" and to measure its value by achievement and what we call "character," without a realization that unless the reproductive function is wisely used and in accordance with the development of individuals and of their limitations we can have but little success as a race. There is a good deal of talk about "good behavior" and "double standards" and various other things. Their real significance lies in the fact that unless we have a code of sound biological behavior we not only greatly increase human discontent, but can destroy the race. The long period of immaturity of the human animal demands that the family have permanency. We cannot expect to have a hit-and-miss moral code in a realm where children are involved and expect to succeed as animals subject to the rules of biology. Our whole aim should be to make better animals and better people. We can make better animals only if we respond adequately to the laws of biology controlling improvement in stock and in the race. An adequate understanding of human breeding and proper guidance by a biological engineer would seem to make it possible for us to avoid the constantly recurring surgical operations of society which we call "war" with their destruction of the lives of soldiers and with damage for generations extending into the civilian population.

When man decided to get out of the trees, come down on the ground and get around on his hind legs in order to get more food to eat, he made a great decision. It gave him the chance to capture the world. He was able to do this because he had intellectual qualities and a body with considerable capacity for adjustment. In spite of various vestigial remnants, such as the appendix, and some

rather unfortunate relationship of the joints and bones, the human body is capable of carrying on its task over a number of decades with satisfaction. The doctor's business is to insure a healthful span of life, but he can be only a guide. Each man runs his own gullet and decides just what shall pass through it.

The moral and spiritual qualities of man make him significant. Without them he would be just another one of the tribes of living things that have come and gone upon the surface of the earth. We have not given our brains full play in trying to use what we call conscience, or our sense of spiritual and idealistic values or our unusual capacity for coöperation. We, as doctors, know that we have in hand information which, if properly used, would change the whole status of man by giving him comfort and ease. Perhaps that very process might at the present time be a source of damage to him. The things that build character seem to have to come hard and often arise out of trouble and pain. The biological engineer must have constantly in mind the fact that he may be doing some harm by doing too good a job of protection.

At any rate there is no greater value in the universe that we know about than a new baby. What we need to do is to try to see that everything that can make that baby happy and well shall be done, that its nervous system shall grow in keeping with its body, that its environment shall be wholesome, that satisfactory habits will be developed and that, above all, the true and clean processes of normal biology, with their various implications, may be put into play in order to give us a human society that is worthy of permanent existence.

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SOME ASPECTS OF NUTRITION IN SURGICAL PATIENTS*

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PART I

WITH the development of antisepsis, and later asepsis, the technical aspects of surgery received renewed impetus and the surgery of the body cavities and their contents became commonplace. During this period, anatomy and pathology were emphasized in the training of the surgeon. It was believed that if the operator had an intimate knowledge of anatomy and a working knowledge of pathology he had all the basic science training that was required. At the beginning of the century the basic medical sciences, as we understand them today, began rapidly to expand so that a more comprehensive picture of normal function became available. Surgeons were slow to accept the results of physiological investigations, so that little attempt was made to apply these to the problems of the surgical patient. Even when attempts were made

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to do this, much that we did lacked critical judgment. On every surgical ward rounds, one heard the statements, "push fluids," "give salt," "maintain glucose balance," and a host of other terms which were used without knowledge of the complexity of the processes involved in the condition which the individual patient presented. Such a program often did as much harm as it did good.

Within the last two decades surgeons have recognized that the intelligent evaluation of many of the problems of pre- and postoperative care demand an intimate knowledge of fundamental physiologic principles. I should like to discuss with you a few nutritional problems of the surgical patient, for we believe that a better understanding of them may lead to a reduction in the morbidity and mortality of certain operative procedures.

GENERAL CONSIDERATIONS

One of the most common conditions which the surgical patient presents is malnutrition. Either as the result of a restriction in the diet because of pain or vomiting; the existence of an accessory foodstuff deficiency; the failure of certain viscera to synthesize the split products of foodstuffs so that they may be deposited in the organism; the loss of excessive amounts of these synthesized substances; or, as is not infrequently the case, because of an inadequate diet imposed upon the patient by one who knows little about the complex problems of nutrition, the patient frequently comes to operation in a state of profound nutritional imbalance. One of the most important of these deficiencies is related to a restriction of the intake of protein, the excessive loss of protein, or the failure of protein synthesis in certain important viscera such as the liver.

Prolonged restriction of protein in the diet causes a reduction in the concentration and the total amount of the plasma protein. The chief function of the plasma protein is to keep fluid in the blood vessels. It does this through the colloid osmotic pressure which it exerts. Starling¹ pointed out that the osmotic pressure of the plasma crystalloids, although large (5,000 to 6,000 millimeters of mercury) as compared with that of the plasma protein (30 millimeters of mercury) is of little importance in keeping fluid in blood vessels because crystalloids pass freely through the walls of these vessels.

It is now more or less generally agreed that as the concentration of the plasma protein is reduced from its normal of approximately 7.0 grams per cent, and the osmotic pressure exerted by the protein is proportionally reduced, fluid begins to leave the blood vessels, resulting, first, in a latent and, finally, when the accumulations in the extravascular reservoirs become great enough, in evident edema.

Latent and manifest edema have become more frequent in surgical patients as the enthusiasm of surgeons and their house officers for the intravenous introduction of large amounts of salt solution increased. Weech and Ling² have shown that the introduction of large amounts of neutral sodium salts will intensify the edema occurring at any given level of the plasma protein and, likewise,

if the sodium ion is restricted it is often difficult to produce edema even though the plasma protein concentration is reduced.

We have frequently obtained evidence in our patients that as the plasma protein concentration is reduced from its normal level, decreasing amounts of fluid and salt are required to cause edema. It should be remembered that evident edema of the subcutaneous tissues is but an external manifestation of a general process. Its occurrence in the postoperative patient is too frequently the result of lack of knowledge of the physiochemical mechanism of the movement of fluids across vascular membranes.

It is of the greatest importance that the clinician look upon the plasma protein and the stores of protein in the body as complementing each other. Except in those conditions in which the loss of plasma protein occurs rapidly, a reduction in plasma protein concentration is nearly always associated with a reduction in the stores of easily mobilizable protein of certain viscera. Regardless of whether one accepts Whipple's³ concept of "labile stores" of protein, the work of Addis, Poo, and Lew,⁴ and Luck,⁵ demonstrates that loss and replenishment of protein stores does take place during the restriction and ingestion of protein in the diet. Addis and his associates,⁴ in a study of the loss of protein from various tissues of the body during a fast, found that the liver loses so much more of its original protein content than any other organ that it "suggests that it may be a depot for stored protein and that this special sort of protein may be used during fasting in much the same manner as glycogen during a fast."

In many of the circumstances presented by surgical patients, restriction in intake of a suitable diet leads simultaneously to a depletion of easily mobilizable protein stores and to a serious reduction in the total amount and concentration of the plasma protein.

NUTRITIONAL EDEMA

Several years ago we began to interest ourselves in the patients who, following posterior gastroenterostomy or partial gastrectomy, gave evidence that the new stoma was not functioning normally. The explanation existing at that time for this malfunction was purely an anatomical one, for surgeons believed that a mechanical defect in the method of anastomosis prevented efficient gastric emptying. This gave rise to the general term "vicious circle." We were convinced that the stomata in our patients were adequate in size when we made them and that from a simple anatomical viewpoint nothing was wrong with the length of the loop, the direction of its placement, or the method of suture. Careful study of several of these patients disclosed nothing beyond occasional mild or moderate superficial edema, as a rule a low level of the plasma chlorid, although at times this was above the normal concentration, and frequently a low level of the plasma protein.

These studies were begun at a time when we believed that the intravenous administration of large amounts of sodium chlorid was the major

item of postoperative therapy. The extension of this type of therapy by surgeons took place without full knowledge by them of the control of fluid and electrolyte balance. Large amounts of saline solutions were often administered without careful blood studies. In the entire clinical surgical literature of this period on intravenous fluid administration to surgical patients, with the exception of papers dealing with increased intracranial pressure and shock, one finds hardly a reference to the forces which govern the movement of fluid into and out of the blood vessels and the intercellular spaces. Surgeons were generally unaware of the Starling hypothesis or ignored it.

Jones, Eaton, and White⁶ were the first to report observations on the frequency with which edema may be present in surgical patients, and their experimental studies added greatly to our knowledge of this subject.

Mecray, Barden, and I⁷ demonstrated that in otherwise normal animals even poorly made stomata functioned moderately well, and became convinced that a simple anatomical basis for "vicious circle" was not sufficient to account for many of these complications. When, as the result of a diet low in protein and repeated plasmaphereses, we reduced the serum protein concentration in dogs, we then obtained evidence of an increase in the time necessary for the stomach to empty a water barium meal. When hypoproteinemic dogs were given sodium chlorid intravenously, the gastric emptying time was still further prolonged.

When these hypoproteinemic animals were sacrificed we found that the gastro-intestinal tract, as well as the subcutaneous tissues, showed evidences of a widespread edema.

Dogs which had been subjected to a subtotal gastrectomy and had fully recovered from the operation were also studied fluoroscopically for their rate of gastric emptying. When these same dogs were made hypoproteinemic the gastric emptying time was greatly prolonged. Even the cecum appearance time, or the time necessary for a bolus of barium to move from the pylorus to the cecum increased, indicating the effect of edema on the small intestine.

The problem of nutritional edema in man—using this term in its broadest sense—is often complicated by a number of other factors. In many of the patients coming to us for gastro-intestinal operations there has existed not only a deficit of the primary foodstuffs prior to operation, but also a deficit of the accessory foodstuffs, the vitamins. The studies of Cowgill⁸ and his associates have demonstrated the close relationship of certain of the vitamin deficiencies to alterations in gastro-intestinal motility.

At the time of admission to the hospital the plasma protein concentration of the patient is often within normal limits because of dehydration, but when attempts are made to overcome the dehydration, prior or subsequent to operation, the plasma protein concentration frequently drops and fluid retention in the extravascular fluid reservoirs begins.

When the edema of trauma is further accentuated by the edema of hypoproteinemia the newly

made stoma of the gastro-enteric anastomosis will not function normally, and a moderate or serious delay in gastric emptying results. We believe that the edema at the site of the operation may so reduce the size of the newly made stoma as to provide a mechanical impediment to gastric emptying. Gastric tone may be normal, gastric peristaltic waves equal to, or greater than their normal depth, but gastric contents remain in the stomach.

The administration of large amounts of salt solution in the postoperative period will intensify and prolong the edema so that the picture which the patient presents mimics in every way a mechanical defect of the anastomosis.

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(To be concluded)

ENDOCRINOLOGY: A CRITICAL APPRAISAL

By EDWARD H. RYNNEARSON, M. D.
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PART II*

THE PANCREAS

ANY consideration of the underfunction of the pancreas would involve a discussion of the entire subject of diabetes mellitus, which is obviously impossible in a paper of this length.

Hyperinsulinism, the antithesis of diabetes mellitus, is an extremely rare disease. Unfortunately, the condition of hundreds of patients is diagnosed as hyperinsulinism, simply because they feel a little weak or have other vague symptoms between meals, or because the sugar-tolerance test shows a flat curve. The term "hyperinsulinism" should be reserved for patients who have actual disability with definite, clear-cut symptoms simulating in all respects those of a severe insulin reaction. These symptoms follow a definite pattern and are produced by fasting or physical exertion. The level of blood sugar is consistently low during attacks, and symptoms are speedily relieved by the prompt administration of sugar. If hyperinsulinism actually exists, the patient should have the opportunity of a thorough exploration of the pancreas, for if an adenoma of the islet cells is found and removed the patient is cured. Unfortunately, adenomas are

*Part I of this paper appeared in the June issue of CALIFORNIA AND WESTERN MEDICINE, on page 257.

not always present. In several instances complete necropsy has failed to disclose any evidence of a responsible lesion.

THE ADRENAL GLAND

Adrenal Cortex.

Deficiency of the adrenal cortex, whether from tuberculosis, atrophy or whatever cause, produces the well-known syndrome of Addison's disease. Remarkable advances have been made in the treatment of this disease, the most recent of which is the synthesis by Steiger and Reichstein⁶ of desoxycorticosterone acetate. This synthetic substance is the most effective substance yet discovered to increase the retention of salt and water. Thorn^{7,8} of Johns Hopkins University has had the greatest experience in its use and has had splendid results in the restoration of patients suffering from Addison's disease. Unfortunately, it does not affect the metabolism of sugar, and several workers have reported the deaths of patients with findings suggestive of hypoglycemia. Unfortunately, also, if given in too great dosage or in conjunction with too much salt, it is likely to cause generalized edema. Thorn^{9,10} has implanted pellets of this substance beneath the skin of patients suffering from Addison's disease with encouraging results. These pellets are not available for general distribution. There is evidence to indicate that when this hormone is used the amount of potassium in the patient's diet should not be restricted, and in some instances the addition of potassium has seemed wise.

There have been no recent important additions regarding our knowledge of the syndrome resulting from the overfunction of the adrenal cortex. The clinical picture is that described by Cushing^{11,12} as occurring with basophilic adenoma of the pituitary. Emphasis should be given to the fact that not every hairy, obese woman has Cushing's syndrome, arrhenoblastoma of the ovary or a tumor of the adrenal cortex. There are thousands of hairy women who do not have any localizable lesion of any gland; they can best be described as physiologic variants, and the only treatment is local attention to the hirsutism. A patient with a tumor of the adrenal cortex has, in addition to the hirsutism and obesity, plethora, acne, hypertension, glycosuria, striae, osteoporosis, and changes in the electrolytes of the blood. The surgical removal of the tumor or hyperplastic adrenal tissue relieves this condition.

Adrenal Medulla.

The rare syndrome of hyperadrenalism results from the overproduction of adrenalin from a tumor of the adrenal medulla. The clinical picture of this condition is that of paroxysmal hypertension with marked associated vasomotor symptoms which are relieved by the surgical removal of the tumor. There never has been a description of a syndrome associated with the lack of the adrenal medulla. Whether some patients with spontaneous hypoglycemia have this condition because of a lack of the blood-sugar raising effect of adrenalin is unknown.

THE TESTES

The most important recent advance in our knowledge of testicular function has been the synthesis of testosterone propionate. This synthetic male hormone has proved of value in the treatment of male castrates and of certain patients suffering from hypogonadism. Unfortunately, it is being used too widely for the treatment of vague conditions, ranging from "male climacteric" to asthenia. It is extremely difficult to interpret the results obtained from utilizing this substance in the treatment of conditions of this sort. Reports have been published which indicate that in some cases about the same results follow the injection of sterile oil. It should be emphasized, however, that this hormone is a valuable hormone when properly used, but its unwise administration is likely to lead to its discredit. Evidence is not sufficient to suggest that it plays any rôle in the reduction of the size of the prostate.

THE OVARIES[†]

Estrogenic hormones are of two main types: the first includes the naturally occurring estrogens; the other is the synthetic estrogen, diethylstilbestrol. The naturally occurring estrogens are those which are important in causing proliferation of the endometrium of the uterus. They are, therefore, of great value in the treatment of certain patients with amenorrhea and of certain patients who have menorrhagia or metrorrhagia or both, associated with insufficient or incomplete proliferation of the endometrium. These estrogens also produce cellular proliferation of the vaginal epithelium which has led to successful employment of the estrogens in the treatment of gonorrheal vaginitis of the young girl and in the treatment of senile changes that occur in the vagina and external genitalia after the menopause. Estrogens are of great value in the treatment of menopausal states. Finally, it should be mentioned that they are essential for complete development of the breasts.

Synthetic estrogen, diethylstilbestrol, bears no chemical similarity to naturally occurring estrogen. It is now being given a clinical trial in several clinics in this country and seems to be most effective when given orally. It is much more potent than the naturally occurring estrogens.

Progesterone is the hormone of the corpus luteum, and its function is primarily that of differentiating or causing a secretory change to develop in an endometrium that previously has been sufficiently proliferated by the action of the estrogens and beyond which the estrogens continue to exert an effect. This hormone is necessary for the proper function of the pregravid endometrium, for the maintenance of the function of the endometrium during early pregnancy, and is probably necessary for the proper function of the maternal portion of the placenta during the latter part of pregnancy. It acts synergistically with estrogen and has some influence on the metabolism of the estrogens. Progesterone is used at present in those cases of

[†] This subject is taken up in detail by Dr. L. M. Randall in an article to be published in the *Medical Clinics of North America* (Saunders).

atypical bleeding from the uterus in which the endometrium shows an insufficient effect from progesterone and it probably represents substitutional therapy. It is also used in the treatment of threatened abortion.

Space prevents a discussion of the use of pregnant mares' serum and extracts of pregnancy urine. The latter have had their greatest clinical use in the treatment of undescended testes and have produced satisfactory results in well-selected cases. It should be added that many boys with undescended testes will improve spontaneously without any treatment.

THE PITUITARY

The Posterior Lobe.

The syndrome of diabetes insipidus is easily recognized. Emphasis should be given to the fact that not every individual who drinks large quantities of water and who passes large quantities of urine has this disease. If there is doubt as to the existence of this disease, the question can usually be settled by the study of the ability of the kidneys to concentrate urine. No case of true diabetes insipidus in which the urine could be concentrated to a specific gravity of more than 1.010 has been reported. Individuals with nervous polydipsia concentrate urine normally. The treatment of diabetes insipidus is by replacement therapy, either by injecting pitressin hypodermically or by intranasal insufflations of powdered whole posterior pituitary. The latter method, which is much cheaper, is usually quite effective and does not have the unfortunate side effects sometimes experienced when pitressin is administered hypodermically.

There is no recognized syndrome concerned with the overfunction of the posterior lobe of the pituitary.

The Anterior Lobe.

This subject has properly been left to the last because it is a subject about which most is written and about which least is known. Even those workers in laboratories with thousands of animals at their disposal are not in agreement regarding the physiology of this important gland. These workers cannot agree as to whether there is a single specific growth hormone. They cannot agree as to whether there are one or two gonadotropic hormones, or as to the relationship of the pituitary to the metabolism of food. Are there separate hormones for the metabolism of carbohydrate protein, fat, ketones, and so forth, or a single metabolic hormone as described by Collip?¹⁸ As a matter of fact, for the present at least, we probably should not refer to pituitary hormones, but rather to pituitary effects. A list of pituitary principles of hormones which have been described include the growth principle, the thyrotropic principle, the gonadotropic principle or principles, the adrenocorticotrophic principle, the mammatropic or lactogenic principle, the diabetogenic principle, the ketogenic principle, and the parathyrotropic principle. Separate principles have been described which affect the metabolism of carbohydrates, proteins, fats, ketones, and water. A specific metabolic principle

has been described. The existence of a hematopoietic principle has been suggested.

If our friends in the laboratories are having so much difficulty, how can clinicians be expected to evaluate properly therapeutic uses of these unknown substances for undiagnosed conditions? A review of the medical literature leaves doubt as to whether any anterior pituitary hormone produces any effective substitutional effect. The hormone which has had the most extensive clinical trial is the growth hormone, and yet it has never been reported that a pituitary dwarf has been restored to normal height by the use of the substance. At a recent meeting of neurosurgeons from the United States and Canada, this question was asked: "Is there anyone at this meeting who ever has seen any patient with pituitary insufficiency of any type improved by the administration of any pituitary extract yet available?" No one in the audience had ever witnessed any such improvement.

Clinical observations are in a more confused state than the observations of the laboratory scientist. Conditions which are related to a disturbance of the anterior lobe of the pituitary include dwarfism, Fröhlich's syndrome (dystrophia adiposogenitalis), Laurence-Moon-Biedl syndrome (?), Simmonds' disease, hypopituitarism associated with chromophobe adenoma of the anterior lobe of the pituitary, gigantism, acromegaly, and Cushing's syndrome attributable to adenoma of the basophilic cells. There is little evidence to suggest that treatment with any hormone is effective in any of these conditions. Reports have been published indicating an improvement in Simmonds' disease, but all of these cases are open to serious question. Most patients whose condition is diagnosed as Simmonds' disease have in reality anorexia nervosa. Lisser and Escamilla¹⁴ were able to find only sixty-nine verified cases of Simmonds' disease by a complete search of the literature.

COMMENT

This incomplete and informal discussion emphasizes the need for a conservative approach to the better understanding and treatment of these complicated clinical syndromes. Endocrinology is one of the newest and, to me, one of the most fascinating fields of internal medicine. Because of its infancy, there are many evidences of growing pains and some years will pass before, if ever, the study becomes a science.

Mayo Clinic.

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Note: "Suggested Reading" references appear in this issue on page 51.

MALARIA: A CLINICAL SUMMARY*

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MALARIA in California.—An instructive review of malaria in California appeared on January 6, 1940, in the Weekly Bulletin of the California State Department of Public Health. The disease was known in 1840 and increased during the Gold Rush period. From 1849 to 1854, malaria was prevalent in army posts, at one time in northern California affecting 816 per 1,000 men. Its geographic distribution was the same as now. In 1856 a virulent type of disease appeared following the importation of large numbers of Italian laborers for the construction of the first railroad in the state, from Sacramento to Folsom. In 1857-1858 there were authentic reports of wide incidence and serious inroads on the population of Indian tribes. In the eighties, "there were heated arguments between medical men and agriculturalists as to the rôle that irrigation might play in the spread of malaria."

CALIFORNIA STATISTICS

Malaria reporting improved greatly after 1890, the California State Board of Health recording 12,109 cases and 227 deaths from January, 1891, to June, 1896. Highest incidence was consistently in July, August, September, and October. The geographic incidence has never materially changed. The first reported mosquito-control work was undertaken in 1903 near San Rafael, and the following year in San Mateo County. In 1910 Prof. William B. Herms of the University of California conducted the first campaign against malaria-bearing mosquitoes at Penryn in Placer County, followed by a similar enterprise at Placerville in Eldorado County. During the years that followed, volunteer work in mosquito control was carried on in other communities; but it was not until after 1915, when the mosquito abatement act was placed on the statutes, that widespread activities in mosquito control were undertaken.

The decline in incidence of malaria since 1915 has been so striking that too many physicians consider this disease as entirely exotic in California, and of no clinical importance—forgetting that it is deeply established on an endemic basis, and, while smouldering, carries the constant danger of local or even general flare-ups, if precautions are relaxed.

From 1914 to 1920 inclusive, 4,759 cases were reported. In the decade from 1921 to 1930, 1,277 cases were recorded.

The figures for reported incidence in the five years ending with 1939 have been secured from the California State Board of Public Health.* A summary of these figures is as follows:

	Sub- tertian	Simple Tertian	Quartan	Un- known	No History	Total Cases
1935	13	111	7	38	4	173
1936	13	140	1	32	3	189
1937	19	79	8	38	2	171
1938	19	243	4	89	4	358
1939	16	203	5	48	12	284

COMMENT

It is worthy of comment that all types of malaria are still present, that the general distribution is approximately the same as a century ago, and that this endemic area lies chiefly in and contiguous with the central valleys of the San Joaquin and Sacramento rivers. Faust¹ estimates that each reported malarial death represents some 415 cases, and that the reported cases actually represent a much larger morbidity. The California reports are for cases only.

It is evident that the problem of malaria in California has been solved only in part, and that its eradication will require continuance of an intensive campaign. Decreased money and effort can only result in return to an incidence proportioned to the ratio of the present population to that of a century ago. The present incidence, and the definitely known increase of imported cases, make malaria of real importance to the clinician in California. Malarial incidence tends to run in waves having peaks at five- to seven-year intervals. It is easy to confuse regressions in these waves with results of antimalarial campaigns, and to allow relaxation of effort because of such a misinterpretation.

ETIOLOGY

Malaria is caused by infection with one or more of four kinds of plasmodia.

Plasmodium ovale causes both pathologically and clinically a mild and infrequent form of benign tertian malaria which tends to die out by itself. It has been suggested that it is a new parasite in the human host which is not yet well adapted or established. Its prognosis is excellent.

Plasmodium malariae causes quartan malaria, which has an unexplained patchy distribution suggesting that it is dying out as a human parasite. Quartan malaria is the most persistent of all forms, and the most resistant to treatment. It may persist for six to seven years. Relapses are extremely common. The mortality is low, even lower than

* From the Division of Preventive Medicine, School of Medicine, University of California.

* Statistics through the courtesy of Miss Ida M. Stevens, supervising morbidity statistician.

in benign tertian malaria. The temperature chart may give a quicker diagnostic lead than the finding of the usually very scanty plasmodia. Double infection may be seen, but triple infections are rare. Subacute or chronic nephritis is prone to attend quartan malaria.

Plasmodium vivax causes benign tertian malaria. The fever may be irregular or even remittent in the early stages of a first attack. Gradually, however, the characteristic tertian periodicity with intermittence appears, and is the usual fever type in relapses and in secondary attacks. Quotidian fever may be seen during the onset, gradually assuming a tertian cycle, and, later in the course, due to double infection. After some two to three weeks the paroxysms in an attack tend to lessen in severity and then cease. There may be no relapse, but usually after two to ten weeks with little or no fever, a second attack follows, lasting for a few days. Lacking treatment these recurrent attacks may persist for a year or more, generally becoming less severe as immunity increases. Rarely, however, does the patient lack more or less treatment. Even inadequate treatment is valuable, tending to prevent or decrease anemia, splenomegaly, and cachexia. Benign tertian malaria is rarely fatal, but tends to become chronic and so to pave the way for intercurrent infection, and to cause incalculable social and economic loss by weakness, lassitude, and physiologic inefficiency. Increasing immunity may change the usual direct relation between symptoms and number of parasites. Parasites may persist in the absence of fever. Children tend to irregular temperature curves, and chills may be slight or absent. Fever may be missed if it occurs only in the night. Anemia and splenomegaly are important guides. In tertian malaria, the relapse rate is high, being common up to one year, rare after three to four years. Benign tertian malaria is less dangerous, but much more resistant to treatment than subtertian or malignant malaria.

Plasmodium falciparum causes subtertian or malignant malaria. This is the most dangerous and fatal form. The fever is irregular, often low when the symptoms are dangerous, and trivial symptoms may suddenly change to delirium or coma. Rigors are inconstant. Pernicious symptoms, such as coma, vomiting, jaundice, and delirium require instant attention. Malignant tertian should always be considered dangerous. The symptomatology is protean, and may simulate almost any clinical syndrome. This is due to the more intense toxemia, and to the fact that those red cells containing growing forms of *P. falciparum* tend to agglutinate in capillaries and sporulate *in situ*, causing blockage and intense local damage from released toxin, impaired local circulation and possibly from released pigment. As a result, also, growing forms (trophozoites) tend to disappear from the circulating blood, so that only young (ring) forms and sexual forms (gametocytes) are apt to be found on blood examination.

In untreated cases, the temperature tends to fall after a week, with one to four relapses of a week each, separated by one or two afebrile weeks. The

first attack or any relapse may suddenly show pernicious features or may prove fatal, although in general the relapses tend to become less severe, and late relapses (after one year) are uncommon.

DIAGNOSIS

Diagnosis invariably rests on microscopic examination of the blood. In endemic areas the working rule should be to suspect the presence of malaria invariably, even though other diagnoses are definite. Certainly, on the other hand, when quinin or atabrin, in proper dosage for three to five days, does not reduce temperature to continuous normal for at least a few days, then the fever is not malarial. Malaria is peculiarly a children's disease because of their high susceptibility, and especially in small children the symptomatology is so modified that the diagnosis may be missed if no blood examination is made. Congenital infection through the placenta can take place. Chills, chilliness, and sweating may be absent and the frequently low fever may appear only at night and thus be missed. Convulsions are common and may be periodic or very frequent. Splenomegaly follows soon after development of anemia.

The common clinical evidences of malaria are (1) splenomegaly, (2) periodicity of fever or symptoms, (3) history of possible exposure to infection, (4) fever, and (5) a more or less typical blood count. This tends to show leukopenia, and a definite mononuclear increase which, if it reaches 15 per cent, is nearly diagnostic. Henry's flocculation test on the blood serum is of strong presumptive value. Along with syphilis, malaria is noteworthy for its protean clinical picture. It should, therefore, be frequently suspected and rarely diagnosed in the absence of demonstrated plasmodia.

PREVALENCE AND IMPORTANCE

Malaria probably has the highest world incidence and socio-economic effects of any single disease. There is reasonable doubt that its gross incidence has been reduced by the advances of the past thirty-five years. It is nonetheless true that in limited areas, and in special or selected populations, its severity and mortality have been reduced, with no reduction in its incidence. Malaria control is ineffective in general because it is based on methods highly expensive in the departments of sanitary engineering and trained personnel. Reduction in finances means increase in malaria. The disease increased in 1933-1934 in the southern United States. This may be in part in line with reduced public health budgets, and in part associated with the cyclical epidemiology of the disease.

Meleny² states that in 1934 there were approximately 3,900 deaths reported from malaria in the thirteen southern states. In the same time and place, 2,200 deaths from typhoid were reported and 2,000 from diphtheria. The total deaths from these two diseases were little more than from malaria alone. Dauer and Faust³ found that three-fourths of the deaths from malaria were in one-third of the counties in the states concerned. This means a fairly localized problem. Meleny states that,

theoretically, present knowledge of diagnosis and treatment should prevent any deaths at all. The highest death rates were under the age of five and over the age of forty-five. Uncomplicated malaria was more common up to fourteen years of age and complicated malaria after forty-five. The most frequent complications were pneumonia, then nephritis, acute intestinal disturbances, myocarditis, anemia, and cerebral hemorrhage. Most of the fatal cases ran a rapid acute course. He concludes that the attack on the malarial death rate must be by means of early diagnosis and effective treatment. In 1935 it was estimated by the Metropolitan Life Insurance Company⁴ that there were 900,000 cases of malaria in the United States.⁵ Faust⁶ reviewed the figures for 1937, finding in that year a decrease in malarial death rates in all of the states in the area, the average death rate in fourteen states having fallen from 10.2 to 6.9 per 100,000. Faust summarizes as follows: "On the whole, however, the evidence consistently supports the view that the recurrent cyclic curve of deaths, which developed to a peak so suddenly in 1933, has apparently reached its trough, and that, unless unusual circumstances supervene, an average rise in the rate may again be anticipated in 1938 or 1939."

PATHOLOGY

The pathology of malaria is extensive and difficult to summarize. It is characterized by the large dark spleen, which is larger in children and in malarial cachexia, and less in proportion to increased immunity. The spleen is the nursery of plasmodia and the chief recipient of malarial pigment. The liver is enlarged and disturbance of function increases as the acute malarial attack proceeds.⁷ Practically all of the organs are affected. The cerebral and pial capillaries in fatal cases of subtertian are found congested or blocked by schizonts and sporulating forms of plasmodia with punctate hemorrhages in the white matter of the cortex. So-called malaria granulomata and focal degenerations may follow such hemorrhages. Pigment deposit and congestion are found in the marrow and at almost any point in the body.

The histopathology of malaria, in respect of the function and origin of macrophages in defense, has been splendidly studied by Taliaferro and Mulligan.⁸ As summarized by C. A. Bentley,⁹ "the authors consider that general defense reactions are essentially local reactions in strategically placed organs. When malarial parasites are introduced into an immune animal, there is: (a) regional concentration of parasites, and (b) increased phagocytic action." In experimental infection of monkeys with *Plasmodium knowlesi* and *Plasmodium cynomolgi*, "the authors find that phagocytic activity, lymphoid hyperplasia and the concomitant cytogenesis of macrophages are initiated in the spleen and are always most pronounced there; but similar changes, though in a less degree, also occur in the liver and bone marrow as the intensity of malarial stimulation increases."⁸

The features of malarial blood are well described in textbooks. It has been estimated that one para-

site for each hundred thousand red cells is necessary to produce symptoms. The secondary anemia is partly toxic and partly due to rupture of red cells by maturing plasmodia. Malarial pigment in macrophages, leukocytes and endothelial cells is pathognomonic. Pigment from destroyed red cells causes hemoglobinuria, which results in increased production of bile. If this bile outflow is excessive, it may cause vomiting and diarrhea.

"Malarial cachexia is a chronic condition following one or repeated malarial attacks, with persistent secondary anemia, sallow or even icteric skin, edema, emaciation, often enlarged liver, and always splenomegaly. The patient usually has irregular recurring fever. Emaciation, dry skin, asthenia, psychasthenia, and neurasthenia are the rule. Functional disorders are common, and these may be periodic, replacing or accompanying periodic fever. Plasmodia may go through their life cycles with no fever or acute symptomatic indications. . . . The condition is difficult of cure and the plasmodia are difficult to eradicate. . . . As one would expect, tuberculosis and dysenteries easily gain headway. Little exact information is available about the precise influence of complete eradication of plasmodia on malarial cachexia." Traumatic rupture easily occurs.

IMMUNITY

For a long time the conviction has been increasing that malaria produces some kind of immunity which is probably different from true bacterial antibody production, but which is nonetheless protective to a degree. Natives of endemic districts suffer much less from clinical effects of malaria than do newcomers.⁵ First infections in children or adults are apt to be severe. After some fifteen years of repeated attacks, maximal immunity seems to be reached. But there is often a peculiar lack of immunity to other species of malarial plasmodia, and the immunity in general seems to depend to an unknown degree on the continued presence of plasmodia in the patient (see especially Coggeshall¹⁰). Latency or subclinical infection seems necessary to maintain or increase immunity. Wilson & Wilson¹¹ have shown that the immune status is dependent on the frequency of infection, and not on race. They find the most accurate index of endemicity to be the frequency of infections in the nonimmune, that is, the rate in early infancy. In highly endemic regions the infection is acquired in infancy and early childhood. The parasite rate and spleen rate tend to increase to a maximum between three and ten years of age, and then gradually decrease to adolescence when the maximal immunity is reached. In such regions the adults are fairly immune, but with a moderate percentage of enlarged spleens and a scattering of parasites present in the blood. So far, the nature of malarial immunity is not known. True antibodies have not been demonstrated.

Continuation of studies on immunity, such as those of Taliaferro, Coggeshall^{9,10} and others, offers today the most hopeful field for advance in the control of malaria.

TREATMENT

A very concise statement of the principles of treatment where mass treatment is not required and where heavy endemicity is not present, may be given as follows:

1. *Quinin* has its chief action against the growing forms (trophozoites) of malarial parasites. In benign (simple tertian and quartan) infections, one gram (16 grains) of a quinin salt daily, given in three divided doses for five to seven days, has a definite action on clinical symptoms and causes the disappearance of trophozoites until the first relapse occurs. In malignant (subtertian) infections the dose should be increased to 1.3 grams (20 grains), and in some localities to 2.0 grams (30 grains) daily.

Quinin has only a slight action on the sexual forms (gametocytes) of subtertian malaria, although it is a fair gametocide in simple tertian and quartan infections. It has no action on the infective or invading forms (sporozoites) of any malarial parasites.

2. *Atabrin* is somewhat quicker in effect on simple tertian than is quinin, has the same action on quartan, and is, in general, more effective against subtertian or malignant parasites. Its action against sexual forms is the same as that of quinin. It does not affect sporozoites. It frequently causes a yellow pigmentation of the skin which lasts some two or three weeks. The effects on the patient of long-continued use are not well known.

3. *Plasmoquine* acts mildly against the plasmodia of simple tertian and quartan malaria, and almost not at all against subtertian or malignant parasites. It is the best known drug in its effectiveness on the gametocytes (sexual forms) of all malarial parasites, especially those of malignant, or subtertian malaria. Plasmoquine is highly toxic, and a safe dosage should never be exceeded. It should only be used where the patient is under adequate medical observation, and where protection of local anopheles carriers is of importance. When used the dosage should never exceed one grain (0.065 grams) each day for five to seven days.

4. No other drugs have a satisfactory specific action in malaria. Suprarenin, given by the Ascoli method of gradually increasing doses intravenously, at times is most effective in resistant chronic malaria, especially when combined with quinin. Arsenic is an excellent addition to inorganic iron for the treatment of malarial anemia. Carbarsone in the dosage of one grain (0.065 grams) thrice daily is easily combined in capsule with exsiccated ferrous sulphate or iron and ammonium citrate. Neosalvarsan is partially effective against simple tertian trophozoites. Sulfanilamide compounds, while effective in certain forms of monkey malaria, have not justified their use in human malaria. So-called provocative methods, especially for diagnosis, are largely useless and always ill-advised.

5. *Drug prevention* of malaria is impossible, as no substance is known which will destroy sporozoites or prevent their inoculation into the body under suitable carrier conditions. From five to ten grains daily of a quinin salt will usually prevent develop-

ment of clinical symptoms, at the price of frequent cinchonism and decreased effectiveness when larger doses are used for cure. Atabrin can be given, one and one-half grains (0.10 grams) twice daily twice in each week, but should not be continued unduly long until more is known of effects on the human being of long-continued administration. Prevention of mosquito bites is still of primary importance in prevention of malaria. This is facilitated by deterrent applications, proper clothing, and proper use of bed nets.

6. *A practical average routine* in benign malaria is to give 16 grains (1.0 gram) in three divided doses daily for five days in each week for six weeks. The first and fourth courses may well be substituted by one and one-half grains (0.1 gram) of atabrin thrice daily for five days, remembering to warn the patient that a yellow pigmentation of the skin is a frequent and apparently harmless sequel. In malignant (subtertian) malaria, the quinin dosage should be raised to 20 grains (1.3 grams) daily. The dosage noted for atabrin should never be exceeded.

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CHILD FEEDING: A PROGRAM-OUTLINE*

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THE well-balanced varied menu of the adult assures the normal individual of the necessary food constituents. The limited diet of the infant and small child necessitates a more scientific approach if it is to meet the needs of these early years. This paper outlines a program of child feed-

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ing which represents our interpretation of available scientific data and clinical experience in terms of practical food units. The psychological approach, as well as the physiological needs, are considered.

PHYSICIAN'S INTERPRETATION OF INFANT'S NEEDS

There are no scientific criteria of the nutritional condition and food needs of the infant. We have only the physician's clinical interpretation of the condition of the child based on weight, muscle tone, general hygiene, sleep habits, behavior, etc.; and even this interpretation is influenced by individual opinion. We know that the child's most elemental need is that of food and that this food must be adapted to his ability to utilize it; it must be easy to digest; it must contain a high level of protein, mineral salts, and vitamins in order to meet his growth and energy requirements; and it must assume gradually the form and variation of the food of the adult.

RECENT STANDARDS

By means of many studies on the apparently normal child, Sherman, Bogert and Porter, Rose, and other workers in this field, have developed standards to meet these needs. It is a well-established fact that the child consumes more energy, in proportion to its size, than does the adult. These authorities have found that a high caloric intake is necessary to meet the high energy need, that during the first year of life 50 calories per pound are required to feed this energy, as compared with 30 calories per pound during adolescence. Of this high caloric intake, at least 15 per cent must be in the form of protein and at least two-thirds of this protein should be in the form of animal protein, the amino-acid content of which is more efficient for growth. A carbohydrate-protein-fat balance of 50-15-35 has been found to be the most efficient in securing the optimum utilization and burning of the food.

The standards for the smaller units of the diet are less well established. Bogert and Porter's¹ recommendations, however, represent a practical average. Those authors suggest at least 1 gram of calcium and 1 gram of potassium daily, and from .6 to .75 milligrams of iron per 100 calories of food taken. Of the vitamins, Bogert considers as necessary 250 Sherman units of vitamin A and 30 Sherman units of vitamin B₁ per 100 calories; and at least 20 Sherman units of vitamin C and 135 U. S. P. units of vitamin D, daily; necessary amounts of vitamins B₂ and E and the more recently discovered vitamins are still undetermined.

The interpretation of these standards in terms of the daily diet has produced a vast array of food plans for the child. A comparison of certain points of these plans, and an attempted evaluation of their respective merits, have convinced us that our program as presented here fulfills the child's food requirements in accordance with our present knowledge.

SUBSTITUTES FOR BREAST MILK

We have no perfect substitute for breast milk. No artificial formula can carry the protection which

is afforded by the immunizing properties of breast milk. Cow's milk, which is our most natural substitute, however, can be sufficiently modified in formula to make it compare favorably with breast milk in all other respects. Its constipating properties can be changed and, in modified form, a curd which more nearly resembles that of breast milk may be obtained. Unsweetened evaporated milk has been growing in favor, both because it supplies the desired small curd and because of the convenience of its use, especially in traveling. It has been shown, however, that cow's milk, and especially milk formulae, are markedly deficient in vitamin C. Therefore, orange juice is given early, even though clinical manifestations of vitamin C deficiency are seldom seen before six months of age. Merritt,² of the New York Babies' Hospital, suggests that it be started before the end of the first month; Bridges,³ of Columbia, suggests that it be started during the second or third month. As a source of vitamin C, citrus fruits have an advantage over the synthetic product when taken orally, since recent work⁴ appears to show that the natural sources of the vitamin undergo less bacterial destruction in the intestinal tract than does the synthetic product, and, therefore, offer greater protection.

SUPPLEMENTS TO MILK

It soon becomes evident that milk alone, which is, after all, quite a dilute food, cannot satisfy the child's increasing caloric needs. We, therefore, seek a more concentrated form of fuel which has more or less the same assimilable properties, and we find it in finely milled cereal. Here again opinions vary regarding the age at which the new food should be started; its addition is recommended at from three to six months of age. All feel, however, that the weight gain of the child constitutes the best criterion for this point.

The constituent of milk which next requires supplementing is iron. Egg yolk is a simple food high in iron which would seem to fill this requirement, but its addition at this age is questioned by some workers because of its cholesterol and lipid content. No deleterious effects from these constituents have yet been shown, however. The addition of animal protein follows the addition of egg yolk quite naturally. Bogert and Porter feel that the child should have egg yolk at from seven to nine months of age, but they withhold all meat, except bacon, until the child is two or three years old. Merritt, on the other hand, suggests the addition of egg yolk at four months and of beef at six months of age.

OTHER FACTORS

With these additions the diet theoretically fulfills all the requirements of the growing body. We now face the problem of meeting the changing needs of the growing child from the standpoint of the mechanics of digestion. By this we mean the addition of sufficient bulk to assure regular and thorough evacuation, with avoidance of foods which would irritate or overtax the still delicate digestive system. While the child is still unable to masticate the coarser foods, this need is met quite satisfac-

CHART 1.—Diet Schedule
Two to Four Years

Name Age Date

Breakfast:

- tablespoonfuls fruit, of those allowed.
- cupful cereal, with warm milk and a little sugar.
- soft-cooked egg; or two strips bacon.
- slice dry toast—buttered.
- cupful warm milk at end of meal.

Dinner:

- tablespoonfuls meat or fish as allowed.
- tablespoonfuls mealy potato, with butter.
- tablespoonfuls other well cooked vegetables.
- tablespoonfuls raw vegetable.
- slice dry bread or toast—buttered.
- tablespoonfuls any dessert allowed.
- cupful warm milk at end of meal.

Afternoon:

- cupful fruit juice, diluted with a little water.

Supper:

- cupful milk soup, or meat soup without fat; or
..... tablespoonfuls mashed cottage cheese.
- tablespoonfuls well cooked vegetables.
- slice dry toast—buttered.
- tablespoonful cooked fruit for dessert.
- cupful warm milk at end of meal.

At least four glassfuls of water should be offered daily—between meals rather than at mealtime.

The child should be taught to eat slowly and to drink slowly.

Additions to the present diet should be made gradually, so that the child may become accustomed to one new food before another is given.

The meals should be attractive, pleasant, and punctual.

torily by the use of fruit and vegetable purées. These are added by various workers at from four to nine months of age. Mashed or chopped, followed by whole cooked fruits and vegetables, they make natural stepping-stones to raw fruits and vegetables to which the child is accommodated by gradually increasing dental development. The time for addition of raw fruits and vegetables varies widely—from eighteen months to five years. A similar shift is made from the finely milled to whole-grain cooked cereals during the second year of life, and to uncooked whole-grain cereals in the late preschool years. The addition of these foods serves a double purpose in that they also introduce the child gradually to the foods of the adult world.

With this increase in fruit, vegetables, and cereal, we develop an imbalance in our carbohydrate-protein-fat ratio which requires the addition of a high protein, low carbohydrate food. Egg white supplies this demand as do, later, cottage cheese and lean meat.

The food plans which have been outlined show a general uniformity of opinion regarding the addition of various foods to the diet, but differences of opinion as to the ages at which these foods should be added. From our own clinical experience, as well as from the reported work and experience of others, we have evolved the following general program for child feeding.

FEEDING PROGRAM EVOLVED BY THE AUTHORS

Breast milk is, of course, the most satisfactory infant food. However, since breast milk is not always available, we must be prepared to supply a substitute, even during the first month. At this Clinic unsweetened evaporated milk and Grade A pasteurized milk are considered the best forms of milk for formula purposes. A standard evaporated milk formula for the month-old child contains nine

ounces of unsweetened evaporated milk, fifteen ounces of water, and one or two tablespoonfuls of karo. Since the only actual deficiency, according to our optional standards, is that of vitamin C, strained orange juice is added, beginning with one teaspoonful. If this amount is well tolerated it is gradually increased to one ounce, which furnishes the desired amount of vitamin C for this age. By the time the child is eight months old he should be receiving two ounces of orange juice daily. The amounts of vitamins B₁ and B₂ are also augmented by this addition. Since we find that most babies handle this food well, we feel that its addition is justifiable and desirable. We thus approach more nearly the suggested optimum standards. By similar deduction we have found that it is wise to add cereal at the fourth month, vegetable purées at about the fifth month and fruit purées at about the sixth month. Very ripe raw banana is also tolerated well by most of these babies.

At about the sixth month the maximum drop in the hemoglobin concentration of the blood occurs. This fact has been borne out at our Clinic by repeated hemoglobin determinations. Furthermore, an analysis of the food intake at this age shows that the iron content of the diet has not increased in proportion to the total intake of food. We feel that the advantages of egg yolk as a source of iron for infants outweigh its possible but so far unproved disadvantages. Therefore, egg yolk every other day is now added to the diet. We have been following such a plan for the last ten years with gratifying results. At eight or nine months of age the iron content is further augmented by the addition of scraped beef on alternate days. Meat is added in preference to increasing the egg yolk to a daily portion in order to accustom the child to meat food as early as possible, since at a little later age he accepts new foods less readily.

At eight or nine month of age the average child is being offered ten ounces of unsweetened evaporated milk or more in a formula daily, one egg yolk every other day, one tablespoonful of scraped beef on alternate days, one-half cupful of cereal, one ounce of toast, four tablespoonfuls of vegetable purée, two ounces of strained orange juice, and one tablespoonful of fruit purée daily.

This dietary now approximates closely the standard requirements for the eight- or nine months old child. The iron intake, however, is still 17 per cent below that estimated as the amount necessary for optimum benefit, and the total amount of carbohydrate falls about 25 per cent short of our accepted standard. These deficiencies are easily remedied by increasing the cereal intake and by introducing simple desserts which contain small amounts of egg and sugar.

At one year of age bacon is introduced as the first salted food, and Grade A pasteurized milk is substituted for the milk formula. Further variation of the milk intake may be obtained by the use of milk soups. Mashed and chopped vegetables are started at fifteen months of age and are replaced by whole cooked fruits and vegetables at eighteen months of age. At two years of age the first raw

fruits and vegetables—aside from banana, which is usually given earlier—are introduced.

THE CHILD'S DIET SUMMARIZED

These gradual changes in and additions to the growing child's dietary, which form the basis of our practice, may be summarized as follows: milk (the form to be decided by the physician) is given throughout childhood—about one quart daily; orange juice is added at from one to two months of age; cereals, finely milled, at from three to four months; vegetable purées at five months; fruit purées at six months; egg yolk at six or seven months, and whole egg at about one year; scraped beef at eight or nine months, and other meats during the second year; simple milk and egg desserts at eight or nine months; raw fruits and vegetables at two years; fish and cheese at from two to three years; and whole-grained dry cereals at the end of the second year.

INDIVIDUALIZATION IS IMPORTANT

This schedule represents our interpretation of the growing child's nutritional needs in terms of food. However, individualization must of necessity play an important part if we are to meet the needs of all children. We must keep in mind the fact that our aim is not to stuff the child with certain foods, but to try to supply foods which will meet his particular requirements. The amounts of the various constituents, which the child accepts, may vary from day to day. The important thing is that this optimum amount be offered regularly in one form or another; for instance, if the child persistently refuses egg yolk as such over a period of time, then it should be offered in the form of simple puddings or drinks. We wish to satisfy not only the child's optimum needs, but his passing appetite as well. Dr. Clara Davis of Chicago has shown us rather clearly that the child's appetite serves as the best judge of what he needs, especially that of the small child who has not acquired the bad habits of adults.

A second problem evolves from the problem of individualization, and that is whether or not the child's refusal of food is based on physiological or psychological reasons. Persistent refusal of food has been suggested as a possible indication of allergy; this fact, however, has not been confirmed by clinical evidence. We are finding that the children who are offered their food punctually, in a pleasant and quiet manner, present few eating problems. On the other hand, the child who is constantly nagged by the mother to eat what she feels is the correct thing for him to have soon develops unpleasant feeding habits and becomes a behavior problem. As Dr. C. A. Aldrich has told us many times, the child who is forced to eat is the child who will not eat unless he is forced.

Another disciplinary problem may arise as a result of offering finely divided foods over too long a period. If the child becomes too accustomed to this easy manner of eating, he may refuse to make the effort to chew the coarser foods, even though he is quite able to do so. The transition to coarser

CHART 2.—Foods Allowed

Meats:

Chicken, lamb, beef, tender veal: broiled or roasted; liver and bacon: broiled; all meats prepared and served without gravies. Fresh white fish: baked, boiled, or broiled, and served with butter only.

Eggs:

Scrambled with milk (over hot water), poached, baked, or coddled.

Milk Products:

Whole pasteurized cow's milk: plain or lightly flavored with cocoa. Butter (not butter substitute) may be used in moderate amounts. Cottage cheese: mashed with a fork, and served without added salt or cream.

Cereals:

Wheat hearts, farina, oatmeal, cornmeal or white rice: well cooked and served with milk. Ready-to-serve cereals, not combined with bran, may be served occasionally.

Breads:

Light whole wheat, graham, or white breads; toasted as a rule. Graham and arrowroot crackers may be served occasionally for variety.

Soups:

Milk soups: made with three-quarters whole milk, and one-quarter allowed vegetable. Meat soups: meat broths with fat removed may be offered for variety. Serve soups only at light meal.

Vegetables:

Cooked: summer or winter squashes, string beans, asparagus tips, carrots, young beets, small green peas, fresh baby lima beans, chopped celery, white or yellow turnips, spinach or chard, or tomatoes (without soda), or puréed corn: all cooked in lightly salted water, or canned. White potato: baked until mealy; or boiled in skin, peeled, and mashed. Raw: finely chopped cabbage, grated carrot, shredded lettuce, or peeled meaty tomato.

Fruits:

Cooked: pears, peaches, apricots, apples, prunes, crushed pineapple, or occasional nectarines; well cooked, or baked and served without skin, or canned in light syrup. Raw: sectioned grapefruit or orange, very ripe banana, or occasional apple. Juices: pineapple, orange, tomato, or grapefruit.

Desserts:

Milk puddings: baked rice pudding without raisins, custards, junket (made with tablet), cornstarch puddings, or tapioca cream: all cooked and served with small amounts of sugar; vanilla ice cream. Fruit puddings: apple, peach, or apricot tapioca puddings; fruit Jello. Other desserts: plain or whipped Jello, occasional small piece sponge or angel cake without frosting.

Only the foods listed above are to be used.

foods, then, marks an unpleasant experience for both mother and child. Similarly, the serving of several foods in one mixture encourages the child to prefer them in that way and to dislike them when served separately.

We find that the three-meals-a-day plan is acceptable even for the smaller children. At this Clinic all children are on this schedule, with fruit juice between meals, by the time they are one year old, and some even at six months of age. This is helpful to the mother in cases in which there are several children in the family and, if he is served with other members of the family, is also helpful to the child, for he will unconsciously acquire food habits from observation of others. The mother is thus relieved of many a teaching problem. Furthermore, small food dislikes are overcome since the child will wish to try something which is apparently being enjoyed by someone else. There is a corollary to this statement in that the child will imitate others in dislikes as well as likes, and in poor as well as good food habits; therefore, it behooves the older members of the family to "mind their manners."

The psychology of child feeding covers a broad field. However, its tenets cannot be ignored in planning a food program for children if the physiological needs of the individual child are to be fulfilled.

DIET CARDS

At this Clinic, in order to make this program a working tool for the mother, diets for the different ages have been printed on stiff cardboard with a punched-out hole in the upper center so that the card may be hung in the kitchen, where it is always available for ready reference. On one side of the card (Chart 1) is a list of foods which are allowed, and on the other an outline menu with spaces for filling in the amounts of each food in the individual case (Chart 2). Six different schedules carry the child from eight months of age to the age at which he follows the routine of the normal adult. The first schedule outlines the diet from 8 months to 12 months of age; the second from 12 to 15 months; the third from 15 to 18 months; the fourth from 18 months to 2 years; the fifth from 2 to 4 years; and the sixth for older children. These cards are the outgrowth of many suggestions and requests for condensed workable types of diet schedules on the part of the mothers, and the desire for a time-saving device which would enable her to spend her time in personal interviews with the mother, on the part of the dietitian. By talking to the mother personally, the dietitian is able to explain the diet in detail and to give instructions regarding the preparation of the food. Food idiosyncrasies, likes and dislikes of the child, may be discussed and substitutions made in accordance therewith. As a result the mother has a much clearer understanding of the reasons for a definite schedule and the manner in which it should be carried out. Furthermore, the personal interview gives the dietitian the opportunity to individualize the diet to the needs of the particular child.

SUMMARY

A practical program for child feeding as it has evolved from scientific data, and the personal experience of ourselves and others, is presented. The importance of the psychological approach to the problem is also stressed, as it is felt that this is an indispensable part of any program of child feeding. Finally, the specific, individualized application of this program, as it is carried out at this Clinic, is described.

As our knowledge of food chemistry and values of the nutritional needs of the young child increases, food plans of increasing merit and individual applicability for this age group will be evolved. These programs lay the foundation for the health and development of later life. Their importance, therefore, in the building of a better race cannot be overemphasized.

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IODID OF POTASH: ITS INTERESTING HISTORY

By DOUGLASS W. MONTGOMERY, M.D.
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THE last years of the eighteenth and the beginning of the nineteenth centuries were remarkably active politically. Nothing stirs the human spirit like war and politics, and those were also the years of the French Revolution, the Napoleonic wars, and the founding of the American Republic.

Scientifically there was an equal activity. For example, Lavoisier had cleared up the mystery of breathing; but the politicians do not seem to have kept up with the scientific bent of the times, for, on beheading him, they remarked cynically that the Republic had no great need for chemists.

EARLY OBSERVATIONS

Laennec and Dupuytren were among the many who brought light into the darkness of clinical medicine and surgery, and at the same time, in the same place—the St. Louis Hospital—Lugol was trying out on the scrofulous diseases a metal which Bernard Courtois had recently discovered while lixiviating kelp, and to which Guy Lussac, another chemist, gave the name "iodin" (the "violet one," from the Greek), on account of its color.¹

How Courtois came to work on seaweed, which had always been regarded as utterly worthless stuff, and how he came to pay any attention to the minute quantity of iodine he found, is astonishing.² He undoubtedly was a born chemist, and those imbued with this enthusiasm will investigate anything, no matter how stinking or repulsive it may be. Furthermore, the French have a natural aptitude for chemistry, as shown by their cleverness as cooks.

When it was ascertained that some springs contained iodine, the element experienced its first therapeutic vogue, as it afforded an explanation of their curative value. Up to that time this was attributed to something unknown and spiritual, a *quid divinum*. Alibert, in his work on mineral springs, proposed a classification apart for those containing iodine.³

In 1834, Wallace of Dublin began to prescribe iodide of potash for syphilis, and coincidentally the technique for diagnosing the papular and late gummatous lesions was perfected, and it became a great therapeutic favorite in spite of its occasional disagreeable, or even grave, results. Its use spread far beyond this, its most spectacular field, and in my student days became so general that it was often said that if you were in doubt what to prescribe give iodide of potash.

RICORD'S WIT

The following anecdote also gives some idea of the enthusiasm for this drug. Philippe Ricord was

the most renowned syphilologist of his day, renowned for his wit as well as for his scientific ability. One evening at the opera he was loudly applauding an actress when a friend remarked: "You seem to enjoy her singing." "It is not her voice," he exclaimed, "it is iodid of potash I am applauding."⁴

Judge Niles Searls once told me a story which illustrates how universal the use of this drug had become. It seems there was a druggist in Nevada City who, if a miner came in asking for syrup of sarsaparilla, the then popular blood purifier, he would tell him that it was excellent, but that if he would allow him to add a little something to it he would find it much more efficient. That "little something" was iodid of potash, and frequently, as miners were not famous for sexual morality, he would make a hit and increase his reputation.

ACTION OF IODID OF POTASH

The action of iodid of potash on the lesions for which it is adapted is indeed astounding, but still more astounding was the fact that it did not cure the disease. The human being always tries to explain a phenomenon, and if he cannot find a plausible explanation he invents a word to hide or to gloss over his ignorance. So the remarkable fact that it cleared up, but did not cure led to much word coining. Among the laity iodid of potash was called a "blood purifier." This simple term was, however, far from meeting the requirements of the medical profession, and in my young days "alterative" was the favorite. For those who required a still more obscure word, signifying little or nothing, "deobstruent" was available.

From this lavish employment of iodid of potash the profession has gradually receded. One time, in reading an article by Jadassohn, I noted the author's remark that he found he was prescribing it less and less; and I then realized that this was my own experience.

IODISM

Iodism is a term given to the disagreeable by-effects of the drug. Its lighter manifestations are common enough—a persistent bad taste, running at the nose, lacrymation, and iodic acne. It may affect the respiratory and digestive tracts more severely, causing iodic grippe and even death.

Strangely enough, it may incite tuberculous tumors of most repulsive aspect, resembling those of mycosis fungoides or granuloma coccidioides, or even syphilis; and through these mistakes patients have been dosed to death with the very drug that was causing their trouble.

I shall never forget one of these unfortunate cases that I saw with Theodore P. Rethers and William A. Martin.

REPORT OF CASE

A woman, fifty-six years of age, a patient of Doctor Rethers, was taking moderate doses of iodid of potash for a rheumatic affection entailing difficulty of walking and severe pain across the lumbar region. Soon she acquired an inflammation of the right eye and of its upper lid, and was sent to St. Mary's Hospital. Two days later two small papules appeared below the nostrils, and another below the



Fig. 1.—Photograph showing the lesions on the tongue tip, the exuberant growths on the nose, and the huge erosion on the right upper eyelid.

left ear; and a day or two after this, papules arose in the hollow of the right knee. Soon the ocular condition became so serious that Doctor Martin was called.

I first saw the patient on July 31, 1909, and by August 8 the iodic nature of the trouble became quite evident, when large iodic tuberosities with deep erosions appeared on the nose and on the cutaneous surface of the right eyelid. The administration of the drug was then stopped.

One of the most interesting and unusual lesions was a large blister of the tip of the tongue. It projected out as a bluish cone with a base spreading out and filled with pus. This blister shortly broke and exposed a large tubercle the size of the tip of the index finger. This projected boldly out from its base and had a rough cracked top. On palpation it felt of the same consistency as the normal tongue. A thick dark brown coating of the tongue was continuous over it.

Doctor Martin gave me the following description of the ocular conditions. On the outer side of the globe of the right eye there was an elevation of the conjunctiva, pale in the center and congested at the margin. It was solid in consistency. In a few days this had extended to the limbus and had encroached slightly on the cornea. Rapidly other nodules developed at the limbus, until the cornea was encircled, some of them coalescing. These nodules had a malignant appearance, simulating early sarcoma or cancer. There was no tendency to ulcerate or break down.

On the left eye a process similar to that of the right began the next day. The first nodule appeared like a small phlyctenula on the nasal limbus. The process in the left eye then duplicated that in the right, but on the right it was more difficult to observe because of an erosion with accompanying edema that extended across the cutaneous surface of the upper lid. On August 8, as previously mentioned, the iodid was stopped, and in a week the ocular lesions cleared, except for a slight conjunctivitis.

Coincidentally the cutaneous lesions also receded, as they usually do.

COMMENT

The lesions of the limbi of the eyes, as shown in this case, are very rare. I have never seen them before or since, nor have I run across their like in

literature. It is thought that these very active lesions are due to free iodine circulating in the blood. It is surmised that some individuals have this power of isolating the metal.

IODINE AND GOITER

In 1852, A. Chatin demonstrated that goiter was common where the iodine content of the drinking water was low. This aroused a deal of opposition and was finally discredited. Virchow, for instance, said that it was incomprehensible that the absence of a substance could cause such a positive malady as goiter. Baumann of Freiburg in 1895 discovered that iodine in a firm organic combination, thyroxine, is a normal constituent of the mammalian thyroid and, coincidentally, facts accumulated showing the good effects of adding iodine to water poor in this element, justifying entirely Chatin's views published forty years before.⁵

IODINE AS A CAUSE OF BASEDOW'S DISEASE

The normal human thyroid weighs between three and four hundred grains—from half to three-quarters of an ounce—and as an average contains from one-sixth to one-quarter grains of iodine.⁶

That a grave malady of the thyroid, such as Basedow's disease, should arise from giving an ordinary dose of a metal which is a normal constituent of that very organ is most strange. It appears that this accident is most apt to occur in adenomatous enlargement of the gland. Kocher warned against giving iodine under such circumstances. It may, however, occur when there is no manifest trouble present, as happened to a laryngologist whom I met one evening when dining at the home of Dr. George W. Merritt. He drew my attention to his tremulous hands. He had taken iodine of potash for a small opacity of the vitreous which cleared up, but left him with a much graver condition—with tremulousness and tachycardia.

A surgeon who had made a well-deserved reputation in a town near San Francisco had a similar experience in prescribing iodine to one of his patients. Ever after, when this remedy was indicated, he sent the patient to San Francisco. He did not wish any more such adverse advertisers marching around in his home town.

MODE OF ADMINISTERING IODINE OF POTASH

Nature gives iodine in very small doses; for, although universally present, it is so in very small quantities, the most of it in the sea, into which it is washed from the land.

The normal daily requirements seem to be 1/1600 to 1/1200 of a grain. If given as iodized salt 1/12 to 1/6 of a grain may be added to about two pounds of salt. Cod-liver oil is one of nature's ways of giving the metal, and it contains 1/6 of a grain to a quart, *i. e.*, 1/384 grains to a tablespoonful.⁷

Lugol, who first employed the metal as a medicine, seems to have given it highly diluted and in very small doses to his scrofulous patients. He dissolved half or two-thirds of a grain in a pint of water, to which he might add a few grains of sodium chlorid. Of this solution he gave enough

to constitute, at first, half a grain of the iodine, and never more than one grain.⁸

Sutton speaks of a mode of administration which he thinks was first proposed by Sanger Brown. Dissolve an ounce of the salt in a gallon of water and keep it in quart milk bottles in the refrigerator. Take a tumblerful of this at regular intervals.⁹

Before the introduction of modern methods of really curing syphilis with arsenicals and bismuth, with a follow-up of Wassermann tests, the ever-recurring late lesions were treated with iodine of potash, and one got from a daily dose of from fifty to thirty grains just as much effect as from heavier ones.

It is astonishing, however, what large doses may be given, not alone with impunity, but with benefit. Dr. Herbert Moffitt told me of a sea captain with an aneurysm who took three hundred grains a day for ten years. Here it appears to act on the viscosity of the blood, enabling it to glide through the vessels more easily.

SUMMARY OF THE THERAPEUTIC EFFECTS OF IODINE

Iodine is a normal constituent of the thyroid gland, and its absence causes a disease—goiter—quite unlike a deficiency disease. In some people, however, it may incite a grave nervous disorder showing itself as tachycardia, likewise connected with the thyroid, and tremulousness and emaciation. In others, who are said to be idiosyncratic to it, it causes an immense activity in certain tissues, such as the sebaceous glands and mucous membranes, yet it does not increase metabolism. It causes resolution of certain low formed, inflammatory connective tissue growths, especially of syphilis, and to a lesser degree of tuberculosis; yet it cures neither disease.

It can cause all its ill-effects when given in very small doses, yet some can take it for long periods of time without any ill-effects whatever. In fact, it is a remedy full of contradictions and unexpected results, and yet a most useful one when intelligently employed, and is indeed worthy to be placed among the *pauci sed selecta et probata remedia*—the few but select and well-approved remedies.

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THE PRESENT STATUS OF IMMUNIZATION AGAINST PERTUSSIS*

By JOHN J. MILLER, JR., M.D.
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I HAVE been asked to consider the present status of immunization against whooping cough. I have attempted to review this controversial subject and will present to you the evidence available, both pro and con.

THREE TYPES OF VACCINES OR ANTIGENS

There have been three types of vaccines or antigens used with intent to immunize. The first was a suspension of heat-killed or phenol-killed Bordet-Gengou bacilli (*B. pertussis* or *H. pertussis*) made from some of the original strains of Bordet and Gengou. These original strains were used for ten and twenty years. Some are still being used. They have been carried on various media. At first some encouraging reports in regard to the value of this vaccine appeared. Later reports became less favorable. No really thorough field study with these old laboratory strains ever pointed to any efficacy.

In 1916 Chievitz and Meyer,¹ at the National Serum Institute in Copenhagen, introduced the cough plate as a diagnostic procedure for pertussis. They began making a vaccine from freshly isolated strains—that is, within two or three weeks of isolation. In 1924 Meyer, Kristensen, and Sørensen² reported on the prophylactic and therapeutic effect of this vaccine. They concluded that a dose of 22 billion bacteria had very little prophylactic effect. However, when this dose was given shortly before exposure or during the incubation period, the severity of the disease was diminished. For some reason not clear at the present time, the dose of 22 billion was never increased. The product, however, seemed superior to vaccine made from old stock strains.

In 1925 Dr. Thorvald Madsen, Director of the National Serum Institute in Copenhagen, came to this country to lecture at Harvard on the Danish investigations with cough plates and vaccines. His review³ of the subject is classical. Two workers in this country soon became interested in the Danish type of vaccine.

Doctor Lawson at Harvard⁴ and Doctor Sauer in Evanston⁵ began doing cough plates and making up vaccine from freshly isolated strains.

Sound experimental basis for the use of such strains was presented in 1931 by Leslie and Gardner.⁶ They showed that prolonged cultivation of the Bordet-Gengou bacillus caused it to change its antigenic complex. They described four phases through which it passed in the process of becoming "rough" or avirulent. All freshly isolated strains were in Phase I and almost all Phase I strains were highly virulent for guinea pigs. A vaccine made from Phase I strains protected these animals against a lethal dose of other Phase I strains; but

a vaccine made from Phase III or Phase IV old laboratory strains did not so protect.

Sauer⁷ soon began describing favorable results with a vaccine made from Phase I organisms. He increased the dose advocated by Madsen, introduced the use of human blood media, and harvested his growth directly into phenolized saline without washing it. Sauer vaccine is, therefore, an unwashed Phase I vaccine of high count. This is the second type of antigen that has been recommended, and I shall detail reports on it shortly.

The third type of antigen which has been used consists of extracts or lysates of Phase I *H. pertussis*. The Undenatured Bacterial Antigen of Doctor Krueger⁸ and, I believe, the Topagen of Mulford Laboratories are of this nature. As thorough field studies on the immunizing potency of these soluble antigens are either lacking or unpromising, I shall not review them. Further studies will have to be made.

FIELD STUDIES WITH PHASE I BACTERIAL SUSPENSIONS

In the chart, I have collected the reports of field studies with Phase I bacterial suspensions. In these studies this vaccine was given with intent to immunize over a period of time. There are two measures of the efficacy of an agent under such conditions: the attack rate in the group studied, and the communicability rate. Inasmuch as the attack rate normally varies with epidemics and with the age of susceptibles, it is useful only when a rigid control group is set up under exactly the same conditions of age, time, and place. The *communicability rate*—or the secondary attack rate as it is sometimes called—is the ratio of attack to exposure. This index is, I think, more useful in examining the data, particularly in view of the fact that there exists information on the normal communicability rate of pertussis. Biedert,⁹ Green,¹⁰ and Wheeler¹¹ (see Chart 1) found that 91, 70, and 92 per cent, respectively, of young children with negative histories contracted pertussis when exposed.

Madsen¹² reported in 1933 on the use of 22 billion cells as a prophylactic agent during an epidemic in Faroe Islands in 1920. Whereas the communicability rates are not known, and the difference in the attack rates is not significant, the mortality in the vaccinated group was one-sixteenth of that in the control group.

Reading¹³ used Sauer vaccine during an epidemic. He reports forty-nine exposures and only four cases, giving a communicability rate of 8.2 per cent. This is most remarkable. (See Chart 1.)

OTHER STUDIES

The next study mentioned, that of Doull, Shibley, and McClelland¹⁴ of Cleveland, was a very careful piece of work, rigidly controlled. The number of exposures, however, was not known, so the communicability rates could not be determined. The attack rates in vaccinated and unvaccinated groups under exactly the same conditions of age, time, place, and probable exposure, were, however, very striking. They were practically the same. This

* From the Department of Pediatrics, Stanford University School of Medicine, San Francisco.

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FIELD STUDIES ON IMMUNIZATION WITH PHASE I VACCINES WITH COMPARATIVE DATA ON COMMUNICABILITY RATES UNDER NORMAL CONDITIONS OF OCCASIONAL EXPOSURE

YEAR	AUTHOR	BRAND	DOSE IN BILLIONS	NO. VACCINATED	NO. EXPOSED	COM. RATE %	ATTACK RATE %	NO. CONTROLS	NO. EXPOSED	COM. RATE %	ATTACK RATE %
1925	Sauer									91.0	
1926	Sauer									70.7	
1926	Sauer									92.8	
1927	Sauer	Human blood (Kramer)	22	1832	1374	?	75.0	446	1374	?	98.1
1933	Sauer	Sheep blood	80	84	49	4	8.2	NONE			
1936	Daughtry-Denmark	Sheep blood	80	392	?	54	?	13.8	496	?	14.7
1936	Daughtry-Denmark	Sheep blood	80-140	84	20	0	0	NONE			
1937	Sauer	Sheep blood	80	3974	219	17	7.7	NONE			
1938	Silverthorne	Human blood	120	747	91	2	2.2	161	27	23	65.1
1938	Silverthorne	Human blood	75	1815	311	52	16.7	2397	434	348	80.2
1938	Silverthorne	Human blood	80	272	42	7	16.6	256	71	62	87.2
1938	Sauer	Sheep blood	80	154	5	1	20.0				
1938	Sauer	Sheep blood	80	140	7	3	42.8				
1938	Sauer	Sheep blood	80	148	13	5	38.5				
1939	Sauer	Sheep blood	80-100	2453	?	32	?	1.3	1730	?	16.5
1939	Sauer	Sheep blood	80	346	42	11	26.2	182	36	32	88.9

* Dose not as shown (sheep blood).

† See text for details of comparison between cases.

* Vaccine serotypes Phase I but not recently isolated.

† 12 billion cells immunized, 80 billion cells exposed.

Chart 1

report is a very important one, and it conclusively shows that the vaccine used was not effective. The Doull vaccine, however, was made in a slightly different manner from that of other Phase I preparations in that it was washed in distilled water. Therefore, this very good bit of evidence against Phase I vaccines fails to negative the favorable reports of Sauer and others using vaccines prepared differently.

In 1936 Daughtry-Denmark¹⁵ reported on the Sauer vaccine. With a dose of 80 billion cells, she found a communicability rate of 13.7 per cent. When she based the dose on the appearance of immune bodies and found that some children required 140 billion cells, she was able to observe twenty exposures without any cases.

In 1937 Sauer¹⁶ collected all his data and found that, after 219 exposures, the communicability rate was 7.7 per cent. He lacked controls, but the normal communicability rate of this disease had been previously shown to be at least ten times the communicability rate he reported. Note the figures of Biedert, Green, and Wheeler.

In 1938 Silverthorne and his coworkers¹⁷ compared the communicability rate in a small control group with that in a group of 747 children vaccinated with 120 billion Phase I H. pertussis. Their method of preparation differed from that of Sauer only in the use of a sheep-blood medium. After ninety-one exposures only two cases of pertussis were reported in the vaccinated group. This field study is important for two reasons: in the first place the evidence is clear-cut and controlled; in the second, it indicates that human-blood medium is not essential in order to obtain a potent antigen.

The next report is that of Kendrick and Elderling.¹⁸ It is the largest controlled study that has appeared. The vaccine used was that made by the authors. Again sheep-blood medium was used. The bacterial suspension was washed once in saline. This product, therefore, differed from Sauer vaccine in two details. The total dose used was slightly less than recommended by Doctor Sauer. The communicability rate in the vaccinated group was 16.7 per cent, as compared to 80.2 per cent in the control group. This evidence is very important because of the large size of the groups studied. It is decidedly favorable for vaccination.

EFFECT OF VACCINE UNDER REPEATED AND MULTIPLE EXPOSURE. CHILDREN'S HOME (KRAMER) NO BLOOD COUNTS OR COUGH PLATES.

9 Sauer Vaccine 2 years previously 80 billion	1 escape	8 had cough	6 for an average of 3 weeks. 2 for one week or less.
8 positive histories of pertussis	0 escapes	8 had cough	6 for an average of 3 weeks. 2 for one week.
12 negative histories of pertussis	0 escapes	12 had cough	10 for 7 weeks or more. 2 for 5 weeks.

CHILDREN'S T.B. HOSPITAL (SIEGEL & GOLDBERGER)

	Exposed	Typical Pertussis	Atypical Cough + Lymphocytosis	Total	Com. Rate %
Sauer Vaccine 80 billion	17	5 ¹	4 ⁷	9	53
Positive Histories	16	5	0	5	31
Negative Histories	19	10	1	11	58

(X) Vaccinated 3 mos., 12 mos., 12 mos., and 16 mos. previously. (Y) All vaccinated 7 mos. previously.

Orphanage (Sauer 1939)

	Exposed	Pertussis	Com. Rate %
Sauer Vaccine 80 billion	75	6	8.0
Unvaccinated (history not given)	70	52	74.3

Chart 2

CALIFORNIA STUDIES

Last year, here at Del Monte, Doctor Singer-Brooks of the University of California¹⁹ presented her field study. She used a Phase I vaccine manufactured in California from strains isolated at the two medical schools in San Francisco. This product is similar to Sauer's in that it is unwashed and grown on human blood. Her communicability rates are quite similar to those of Kendrick and Elderling. Doctor Deamer will have more to say about this study. (See Chart 1.)

The next report is that of Siegel²⁰ in New York. He endeavored to compare the Sauer vaccine with the New York City Health Department product. There are, however, so few exposures in his study that comparison is difficult. The New York City vaccine was serologically Phase I, but was not made from recently isolated strains. The communicability rate in the control group was very low. This report does not help to clarify the issue very much.

This January, Sauer²¹ published his most recent report comparing attack rates in a vaccinated and control group. The results are similar to those he reported earlier, and furnish a local control.

The last line in the chart summarizes the results obtained by Doctor Faber and myself²² at the Stanford Children's Clinic. Since making the chart we have had two more escapes in our vaccinated group, which raises our number of exposures to forty-four, and lowers our communicability rate to 25 per cent. This is compared with a very high communicability rate of 88.9 per cent in our control group. It would appear that our results were not quite as satisfactory as some of those reported above. I have included, however, two questionable cases in the eleven listed in the vaccinated group. I shall amplify these data a little later.

I have gone into the reports summarized in Chart 1 in detail because here is the evidence on which we must judge pertussis immunization. The remaining charts contribute to a lesser extent to the problem.

RESULTS OF FAMILIAL EXPOSURES.

AUTHOR	IN VACCINATED CHILDREN				IN CONTROL CHILDREN			
	NO. EXPOSURES	NO. CASES	NO. ESCAPES	COM. RATE %	NO. EXPOSURES	NO. CASES	NO. ESCAPES	COM. RATE %
Sauer 1933	29	0	29	0.0				
Sauer 1939	27	3	24	11.1				
Kendrick & Eldering 1938	83	29	54	34.9	160	143	17	89.4
Miller & Faber 1939	11	3	8	27.3	9	9	0	100.0

Chart 3

In Chart 2 are summarized data on the effect of Phase I vaccines under conditions of repeated and multiple exposures. The clinical report of Kramer²³ is of interest in that he observed that children vaccinated with Sauer vaccine coughed no more than did children who had a positive history of whooping cough. Unfortunately, no blood counts or cough plates were done for diagnostic purposes.

Siegel and Goldberger²⁴ reported an epidemic in a tuberculosis hospital. Nine of seventeen vaccinated children who had had the Sauer product developed typical or atypical pertussis. Five of sixteen children with positive histories had pertussis, as did eleven of nineteen children with negative histories. Here it is obvious that the vaccine used was not adequate for protection against multiple exposures. Here again is evidence that second attacks of pertussis may occur. In this regard I might mention that I have observed six second attacks of the disease, all with positive cough plates. The history of the first attack was entirely reliable in five, and in the sixth instance the first attack had been proved bacteriologically.

Sauer²¹ mentions an epidemic in an orphanage in which he reports remarkable protection. In Evanston his own product has been very effective. In the light of this it is difficult to explain the above results of Siegel and Goldberger.

In Chart 3 I have summarized available material on the results of familial exposures in Phase I vaccinated and control children. Familial exposure is a fairly severe test, although perhaps not so severe as multiple exposure in an orphanage. The figures are self-explanatory. Since this chart was prepared, Doctor Faber and I have observed one more familial exposure that resulted in an escape. This would bring our communicability rate down to an even 25 per cent. If we were able to protect three out of four babies, why did we fail to protect the fourth? I think the answer lies in the variation of the normal immune mechanism. Some individuals have inferior "antibody factories." Daughtry-Denmark¹⁵ has shown that some individuals require much more vaccine than others to produce complement-fixing antibodies for H. pertussis. There probably also exists a small percentage of individuals who cannot be immunized at all. A child whom I saw with bacteriologically proven, severe pertussis on two successive summers is probably in this category. If an attack of the disease did not confer any protection for twelve months, I doubt if massive doses of vaccine would have succeeded.

A COMPARISON OF THE REPORTED SEVERITY OF CASES OF PERTUSSIS IN VACCINATED AND CONTROL CHILDREN.

YEAR	AUTHOR	DOSE IN BILLIONS	NUMBER VACCINATED & NUMBER OF CONTROLS	TOTAL	FATAL	CASES				WILD	ATYPICAL	QUESTIONABLE
						SEVERE	MODERATE	MILD	QUESTIONABLE			
1924	Madsen and Zachariassen	22	2094 vac. 627 cont.	450	1	4	35	410	—	—	—	—
				405	13	27	90	275	—	—	—	—
1929	Madsen and Zachariassen	22	1832 vac. 446 cont.	1374	1	8	29	1336	—	—	—	—
				438	8	35	170	225	—	—	—	—
1937	Siegel and Goldberger	80	17 vac. 16 + hist. 19 - hist.	9	5		3	0	5	4	0	1
				11	11		10	0	1	0	1	—
1939	Singer-Brooks	80	272 vac. 256 cont.	7	0	0	5	1	1	1	—	—
				62	0	10	44	6	0	0	—	—
1939	Kendrick and Eldering	75	1815 vac. 2397 cont.	52	0	2	12	17	21	—	—	—
				348	0	45	206	78	14	—	—	—
1939	Miller and Faber	80	346 vac. 182 cont.	11	0	0	4	3	2	2	—	—
				32	0	3	23	4	1	1	—	—

Chart 4

In Chart 4 I have summarized the reported severity of cases of pertussis occurring in Phase I vaccinated and control children. It is obvious that opinions as to degrees of severity may be readily colored by rosy hopes. Such opinions are of rather small value in a question of this kind. The differences in death rates between vaccinated and control children noted by Madsen and Zachariassen¹² are, however, striking. Singer-Brooks, Kendrick and Eldering, Doull, and Doctor Faber and myself felt, however, that the cases among vaccinated children tended to be milder.

COMMENT

On the basis of this evidence which I have reviewed I think it is self-evident that active immunization against pertussis has been accomplished with certain preparations under certain conditions. The immunity produced in the majority of children vaccinated has been of the order of that which is produced by an attack of the disease. This does not mean complete or permanent immunity, but rather increased resistance. It may be broken down under intensive exposure.

RECOMMENDATIONS

With the reports before us I think we can outline the best thing to do now. I should like to make the following recommendations:

The product used should be a bacterial suspension of recently isolated Phase I H. pertussis. The total dose should be not less than 80 billion bacterial cells for a child under thirty-six months of age. This is Doctor Sauer's advice, and I believe very good advice. Until we have a simple, adequate test of immunity, older children should be given larger doses empirically. The quantity of vaccine seems to be very important. I advise 100 billion cells for children of three and four years, and 120 billion cells for older children.

On the basis of our own experience and the observations of Doctor Singer-Brooks, annual re-injection with a fractional dose of vaccine is advisable. Twenty billion cells are probably sufficient for this stimulating dose.

Immunization against pertussis should be attempted at five or six months of age. I see no reason for not starting even earlier than that, though the antibody manufacturing apparatus is, of course, known to function poorly during the first months of life. The injections are best given

intramuscularly. The total dose of 80 billion cells for an infant can almost always be obtained with three injections, provided the 20 billion per cubic centimeter suspension recommended by Doctor Faber is used. The usual method of administration is 20 billion cells in one cubic centimeter the first time, 30 billion in 1½ cubic centimeters the second time, and 30 billion again the third time. Occasionally this schedule has to be altered because of reactions.

I have not seen more than a dozen sharp reactions to H. pertussis vaccine. These consisted of rather marked swelling of the arm, redness locally, and fever. These reactions caused me considerable concern for twenty-four hours. However, they yielded to iced compresses. Most of the reactions I have seen have been to the first injection of vaccine. I have then decreased the dose given at subsequent visits and administered the total dose in five rather than three injections.

Occasional local and systemic reactions are unavoidable with any protein given parenterally. As long as we give vaccine or toxoid we will have sore arms. In such cases I think one must resort to small doses and then proceed as the severity of the reaction indicates. I have seen no reactions comparable in severity to that which may occur when a fraction of a centimeter of diphtheria toxoid is given to a combined positive Schick reactor.

Phase I H. pertussis vaccine is customarily administered at weekly intervals. An interval of two weeks between injections is probably to be preferred, except during the presence of an epidemic. Intervals of three or four weeks could be used. Though this interval would unduly prolong the period of immunization, I believe the resultant protection conferred would be high.

SUMMARY

The evidence for and against the use of Phase I H. pertussis vaccines for immunizing purposes is reviewed. It is concluded that immunization can be accomplished in the majority of individuals with certain preparations. These preparations and their methods of administration are discussed.

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SYPHILIS*

COMMENTS ON ITS HISTORY

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THE history of syphilis has been somewhat aptly referred to as the negative phase of medicine; and while this opinion, based upon the futility of attempting to determine the source of the disease, is held by many, it becomes justifiable only as long as this endeavor is maintained. The constancy with which such a fallacy can persist, as the vis a tergo of many of the several recognized histories of syphilis, is as amazing as it is illogical.

Nevertheless, anyone who has written on this matter is shortly amazed at the number of individuals interested in it. To this latter group can be attributed my acceptance of an invitation from the secretary of this society to write a paper about this subject.

HOLCOMB'S WORK

If one had been asked to write on the history of syphilis yesterday, one would perhaps have been justified in the contemplation and execution of the task; but today, following the work of Holcomb, which has appeared under the title, "Who Gave the World Syphilis?" one believes the undertaking would be as unnecessary as it would be presumptuous, inasmuch as this work represents an exhaustive amount of actual personal research covering practically every known authoritative ancient

* Read before the Southern California Medical Association, Riverside, April 8, 1937.

and modern document concerned with this disease. It is unique, too, in that it has avoided the common pitfall of practically all modern works on the matter, in that these latter have been satisfied to quote from former translations under the assumption that they were both correct and complete. It would appear, following a perusal of Holcomb's work, that such renderings were neither one nor the other.

COMMENTS

In a previous paper on this subject, which was published in the *American Journal of Surgery* in 1933, we made no attempt to write a history of syphilis; but as the title, "Concerning the History of Syphilis," suggests, we were merely questioning, on a more or less logical basis, the conclusions arrived at by most of the histories then extant, namely, that European syphilis had its origin in the Americas, the which we were loath to believe.

We adopted this course because we were convinced that to attempt to arrive at any legitimate conclusion by means of data taken from ancient manuscripts, translated only with difficulty, would be prohibitive both in point of time necessary to consummate it, and from the fact that it was almost impossible to obtain access to some of the more important older works, which have become national treasures, and are, for the most part, kept in various museums. Furthermore, we believed that, assuming we had both access to the manuscripts and time to complete the work, the ultimate conclusions would be far from dependable if based solely upon this ancient, strictly documentary evidence. This conviction manifests itself in the following citations which are taken from the original paper. "Regarding the early history of syphilis, there are two main sources from which to make our deductions: (1) The writings of poems, recitations, or letters to or for patrons; (2) Treatises on disease."

PATRONS

With regard to the former, some appreciation of the conditions under which individuals existed during those times is essential to truly evaluate their work. Primarily, the patron was a man of great power and wealth, usually of the nobility. Secondly, it would appear that he was a very necessary commodity, in order that the writer might be able to publish any documents for posterity. It naturally follows that whether the patron was a rascal, as he sometimes was, or a godly man, as occasionally happened, little to nothing was published which did not meet with his approval. We must also remember that even were such a patron in sympathy with certain views of the writer, he, in his turn, was forced to be very circumspect in what he allowed to be published. In order to appreciate this, one has only to read comparatively recent history to realize how little offense in that respect was necessary to warrant the severest punishment.

CONFUSION IN TERMS

Regarding treatises on disease: While delving into the history of psoriasis some years ago, it became apparent that during the Grecian, Roman, and Arabic eras of medicine—as witness, Actius,

Hippocrates, Galen, Aegiente, Celcus, and Hali Abbas—the term "lepra" was used to designate many things, and from that time through the Middle Ages, until approximately the eighteenth century, it was used to indicate practically all diseases which were obstinate or those in which the skin presented a loathsome appearance. Furthermore, the biblical description of leprosy as being "whiter than snow" is much more nearly descriptive of a certain type of present-day psoriasis, which, it cannot be denied, is widely at variance with the clinical appearance of leprosy.

While this may be attributed to a confusion of terms, it will be admitted that medical treatises of that period would be somewhat indifferent authority upon which to base the proof of the antiquity of syphilis. In face of this, it seems incredible that the lack of a more recently acquired name should be taken as proof of the nonexistence of any given disease. One strongly suspects that leprosy, psoriasis, and at times even simple exudative eczema of extensive involvement would be classified alike, and cannot but feel that an examination of any given group of individuals of that period, segregated by law and forced to shout "unclean," would afford most medical men of today no small degree of consternation.

In this respect, in a short chapter contained in H. Fracastor's general work, "De Contagiosi et Contagiosis Morbis," devoted to elephantiasis (leprosy), he stated that in certain hospitals in Italy, which were dedicated entirely to patients suffering from this disease, he found very few true lepers, but many patients afflicted with other simple cutaneous affections interned by mistake. The immediate value of early terms in medicine might further be estimated from the term "gros mal," some believing it referred to syphilis, others that it described epilepsy. So, while we may glean much from the writings of olden times, I doubt if we can truly evaluate what was written. In other words, a great deal of time would have to be devoted to the analysis of the data; and, assuming this to be achieved to one's satisfaction, the factual data would still remain a doubtful quantity based upon the above findings.

HISTORICAL RESEARCH FOR FACTS

This mode of procedure has, however, afforded us a certain degree of criticism for failing to follow the beaten pathway of current historical research, and our previous work has been referred to as "a fair theory without any substantiation in point of fact." Nonetheless, our former convictions in this regard appear to have been adequately vindicated following a perusal of Holcomb's work in which the above contentions are fully substantiated and in which it is shown that most modern historians, delving too superficially into the matter and content with the translations of others, have permitted themselves to utilize data they would have hesitated to accept had the original works been available and properly evaluated by them; for it would appear that the work of Ruiz De Isla, including his codex, later brought to light by Montejó, upon which the American origin of the dis-

ease is mainly established following a complete translation made from photostatic copies of the original works by Holcomb, manifests that the early part of the work accuses the Americas of the origin of syphilis, whereas the latter part advocates its ancient European existence. Thus, there appears to be a strange parallel between the works of De Isla and those of Fracastor, inasmuch as the latter also implies in his first book its American origin by the question, "Is it not possible that the cause rests with those men, who . . . tried to explore unknown seas and lands opposite from ours?"

While this suggestion is discarded in a later stanza, in which it is claimed that "it would be impossible in so short a time for a contagion which is slow in its action and not easily taken to have traveled so much territory if brought for the first time to Spain by one ship." The apparent contradictions contained in these works leaves one only the more impressed with the futility of attempting the evaluation of any written material produced previous to or in medieval times. Furthermore, the absolute control of all written data which might account for the situation seems to be well established when we recognize that the earliest official records, attributing the disease to the Americas, was written by a Spanish advocate at the direct command of Charles the Fifth. This was followed, in turn, by several corroborating physicians. This situation appears to be as illogical as if the barons of the Middle Ages had deputed a physician to draw up the fundamentals of the Magna Charta, allowing the lawyers the privilege of supplementing or corroborating it at some later date. It would have been more in order had Charles deputed a physician of the times to supply factual data in the first instance.

One historian observes that the proportion of syphilis in a given peoples bears a direct relationship to the moral standing among them. This is acceptable, and upon this acceptancy alone it becomes difficult to understand the necessity of going beyond Europe to find the disease, where, if we are to believe the edicts or laws published at that time, standards of morality were so elastic as to be almost unknown. On the other hand, records of the early Catholic missionaries indicate that the standards of morality among the American Indians were exceptionally high, as witness: "Women were regarded very highly; for violation of a woman, a man was put to death."

SOME OLD EUROPEAN EDICTS

Let us now, irrespective of their value, consider a few of these old European edicts and also any data which might tend to oppose the view that syphilis did not exist in Europe prior to 1492. William Salicat, in his "Surgery," published in 1276, treats of the prophylaxis of hard and soft sores of the glans or prepuce, following coitus with a prostitute, filthy or menstruous woman.

In 1300, edicts appeared attempting to stop the spread of venereal leprosy. Edward III, in 1346, recognized the spread of leprosy through the women of the stews. In the city of Avignon, August 8, 1347, an edict provided for the inspec-

tion of brothels every Saturday to discover girls therein with any evidence of any disease contracted through venery. In 1430, Southwick imposed a fine on any stew-holder harboring any prostitute with any sickness of breening. Also, they were forbidden to admit any men who suffered from "infirmities nefanda."

Some third of a century before the work of De Isla, Gaspar Torella, in his work, "De dolor in Pudendagra, Dialogus," replies to a query on the part of a character, as to whether it would be possible to exterminate the disease, that an infallible method would consist of appointing matrons under government authority to inspect the public women; those infected were to be segregated and placed under suitable treatment by physicians, and thus the disease would be rooted out.

Two sonnets, written by a Florentine poet in 1480, contain certain stanzas which are considered by Ozman to constitute definite proof that syphilis existed during 1480, the date of their composition. Hesser believes that the few descriptions in early literature in which there is direct relationship between a sore on the genitals and following body eruption were due mainly to the fact that doctors of the period were unwilling to blame venereal conditions for the resultant universal eruptions, and that patients undoubtedly influenced the matter in no small degree. However, he cites the observations of the French physician, De Barry of the thirteenth century, who described a condition venereally acquired which began on the genitalia and spread to the entire body. "Nam virga infecitur, et aliquando alterat totum corpus." Another case cited was that of Nicholas, Bishop of Posen, who died in 1382 as a result of morbus cancri on the genital, followed by ulcers of the tongue and pharynx. Other cases were those of King Ladislas of Poland and Wenzel of Bohemia; and, finally, we quote from an Asiatic work published in the seventh century, "The Thousand Gold Remedies," which states: "A tu ching sore is a sore on the prepuce just behind the corona in men, and on the labia in women. It is depressed and painful and looks like a chancre. A chancre is not painful." It would appear the latter observation indicates that the hard chancre was not an unknown quantity in Asia, even before the seventh century.

We believe it may legitimately be accepted that ancient leprosy was regarded from olden times as a contagious disease which was contracted from unclean or menstruous women, and it is possible, as has been contended, that either gonorrhea or chancroids, or both, may have been referred to; but only syphilis can adequately explain the alopecia occasionally described in this ancient leprosy. The moth-eaten variety of syphilitic alopecia compares much too closely with this vulpina type of alopecia (named so because of its resemblance to a moulting fox) for it to be discarded as an irrelevant factor by any logical mind.

DISEASES ONCE PREVALENT IN EUROPE

Prosch, the Viennese historian, points out that up to 1495 there were four diseases largely prevalent in Europe, namely, juis persicus, fornicia, leprosy,

and *malum mortum*; but immediately following the appearance of syphilis three of these disorders vanished off the face of the earth, and leprosy became much scarcer. It is only feasible to suppose that the former three diseases and a proportion of the latter were in reality syphilis in its normal or less virulent form. This supposition becomes more tenable when we recall that medicine in general believed at a much later date that gonorrhea and syphilis were manifestations of the same disease, and that this belief obtained until 1850, when Philippe Ricord proved them to be two separate disease entities.

DESCRIPTIONS OF THE HARD CHANCER

A pertinent question has been one relative to the apparent lack of ancient descriptions of what would be interpreted as a hard chancre, while those of painful ulcerations with loss of tissue are of fairly common occurrence. The descriptive characteristics of the hard chancre, it cannot be denied, are conspicuously absent. This is to be expected, however, inasmuch as the clinical manifestations of the hard chancre as seen today—viz., single, indurated, painless—would undoubtedly have been a *rara avis* in that day and age; not necessarily from a lesser prevalence of the *Spirochaeta pallida*, but from a comparatively much greater incidence of the bacillus of Ducrey, due to the very mediocre standards of hygiene of this period, which would, naturally, result in a greater frequency of the incidence of the soft chancre. These lesions would be of greater moment in their eyes from the standpoint of their multiplicity, painfulness, and oftentimes destructive ulceration accompanied by the attendant suppurative adenitis; a clinical picture, compared with which the hard chancre becomes somewhat insignificant. Furthermore, under the above circumstances, a purely syphilitic infection would be of less common occurrence than the mixed infection in which the clinical characteristics of the hard chancre are only too often completely overshadowed by those of the chancroid. In this respect, a continental clinic found that a fair percentage of its clinical soft chancres gave positive syphilitic findings following the institution of routine darkfield searches in all cases of soft chancres.

AMERICAN (?) ORIGIN OF SYPHILIS

Zinzsser believes, with Fracastorius, that an unanswerable objection to the American origin of syphilis is the shortness of the period of time elapsing between the return of Columbus and the syphilis epidemic which broke out in the army of Charles in Naples. And while Holcomb is loath to accept the description of that epidemic as being that of syphilis, Zinzsser believes it was, and that it represented a new disease only in that there was a completely altered relationship between the parasite and the host, with a concomitant profound change in its symptomatology.

As was described at that time, it was possessed of a violence seldom to never observed today. It consisted of an afebrile disease characterized by pustular and vesicular eruptions accompanied by extensive ulceration. The first ulcerations usually

appeared on the genitals, although not always. The disease was often transferred from mothers to children in ordinary associations. Ulcerations resulting from the eruption sometimes covered the body from head to the knees; crusts formed and the individuals presented such a loathsome appearance that even lepers avoided them. Extensive losses of tissue in the nose, throat and mouth followed these manifestations, and following them came painful swellings of the bones, which often involved the skull. The disease caused many deaths.

Now, within a little more than fifty years, the disease had evidently changed, for in Fracastor's "De Contagione," which was published in 1546, he states that, although the contagion was still flourishing, it seemed to have changed its character since those earliest days of its appearance. "I mean that within the last twenty years or so fewer pustules began to appear, but more gummata, whereas the contrary had been the case in the earlier years. Moreover, in the course of time, within about six years of the present generation, another great change has taken place, *i. e.*, that pustules are now observed in but few cases and hardly any pains but many gummata."

IN CONCLUSION

Having in so far presented evidence which would tend to indicate, in some small measure, that syphilis might have existed prior to 1492 in areas other than the Americas, we now touch upon the educational standards of those in authority at that time which we believe may be gauged somewhat from officially recognized causes of this new disease, inasmuch as all publications of the period (as we have recounted) were under rigid censorship. The main causes given are as unique as they are interesting:

1. It was brought from the Americas by Columbus.
2. It was a visitation on Spain for the expulsion of the Jews.
3. It was a visitation by God because of certain sinful acts.

It would appear that we have appraised their clinical astuteness as somewhat superior to their mentalities when we believe, in the face of the above, that they were capable of not only classifying the manifestations of syphilis under a single name, but also of determining that the disease, even in its more normally tolerated form, had never existed prior to that time in Europe. And this in the face of the fact that the two fundamentals which are our greatest aids in diagnosis today were unknown, *i. e.*, the etiologic factor and the complement-fixation reaction.

Considering the multitudinous clinical manifestations of the disease, would it not be more logical to assume that the recognition of their being different manifestations of the same disease process was at this time slowly coming into being; a recognition which occurred primarily because of the vicious exacerbation of a long-existent and somewhat attenuate disease entity which had been catagorized previously as several diseases under many different names.

1930 Wilshire Boulevard.

CLINICAL NOTES AND CASE REPORTS

SNAKE-BITES

A COMPACT SUCTION KIT

By ROBERT K. CUTTER, M. D.
Berkeley

AS I frequently fish the streams of the Sierra Nevada Mountains, I have had in my camping outfit the least bulky of the available effective suction snake-bite kits. On one occasion, before leaving camp in a section renowned for rattlesnakes, I tried placing this kit in various pockets; but, due to its size and hard edges, it seemed too uncomfortable an impediment to put up with. In consequence the kit was relegated, as usual, back to my dunnage bag.

That day, with the snake-bite outfit back in camp, four rattlesnakes were encountered under not too comfortable circumstances. This engendered a resolve not to be caught in a similar situation in the future.

Review of the literature confirmed the impression that effective emergency treatment required incision, tourniquet, and suction. There were available two types of suction outfits. The syringe or plunger types were more compact, but seemed impractical, as two hands are required for the proper application, and only one hand would be available if the bite were on an upper extremity. Furthermore, they are not self-retaining, and due to fatigue and the inconvenience of continuously

pulling on the plunger, it seemed obvious that suction would not be as continuous as with the bulb type.

The bulb types of suction devices available, while self-retaining, were bulky *per se*, and the packages necessary to contain the bulb and other accessories were even more bulky.

Since my needs were not met by any available outfit, I decided to try my hand at designing one. An attempt to make up an outfit with an elongated bulb having a glass mouthpiece was not satisfactory, as the bulb plus the necessary accessories was still a nuisance to carry; furthermore, the glass mouthpieces were fragile and broke in spite of various efforts to protect them.

This led to a combined suction device and mouthpiece all of rubber, and in cylindrical form so that the interior served as a container for a smaller similarly shaped suction device for use on the fingers, and the interior of the smaller "sucker" served as a container for the other necessary accessories. In other words, the accessories were contained in a capsule made up of two suction bulbs.

By making the suction pieces with reinforcing bands running horizontally and longitudinally, weight was saved and suction strengthened.

The use of the two nested red-rubber "suckers" as a capsule container proved to have several unlooked-for advantages. While they would not protect the contents against complete immersion in water for a long period of time, they would protect against rain indefinitely or complete, short immersion such as would be encountered when falling into a stream. Rubber has a clinging proclivity for cloth and does not slip out of the pocket easily.



Fig. 1

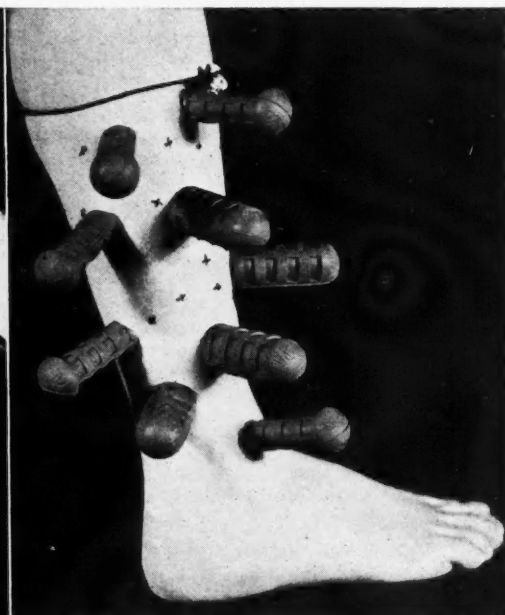


Fig. 2

Fig. 1.—Showing the two sizes of suckers which form a capsule to contain a lancet, a tourniquet, and an antiseptic.

Fig. 2.—Illustrating the use of multiple suction cups on cross incisions over the area of swelling surrounding the bite. Note that the tourniquet is tight enough to stop lymph flow without stopping venous return.

The red color is of considerable help in finding the piece if it is dropped.

This latter point was found to be of practical importance last fall when, on a deer hunt, I ran into a bees' nest and suffered multiple stings, to which I am moderately allergic. Use was made of the six cups in the three outfits which my companions and I carried, and after an hour or so I made my way back to camp with the suckers still applied. From time to time one would be knocked off, and as we were in rough, brushy country, it would have been very difficult to locate except for the red color.

As to accessories the ideal tourniquet would be a rubber band, as the object is not to stop venous flow but to stop lymph return. Unfortunately, rubber bands break unexpectedly, particularly when not fresh. The next most effective tourniquet would be a large handkerchief, but this would be too bulky to include in a compact kit. A piece of soft linen braid seemed the best compromise and was included. A vial of antiseptic and a lancet were also included.

Summary: A suction snake-bit kit is described in which the suction cups when not in use form a compact capsule container for accessories.

Fourth and Parker Streets.

AIRCRAFT AS DISEASE CARRIERS

By HAROLD L. SCHLOTTHAUER, M. D.
Tehachapi

THE great increase in flying has frequently raised the question as to the possibility of transmission by aircraft of diseases and disease-bearing insects over large areas. This possibility was directed to my attention by four unusual cases following within a period of a few weeks the arrival at Muroc of a group of military planes reported to have come directly from South America by way of Panama. These were cases of acute illness produced by the bite of an insect previously unknown to the residents of the Mojave Desert.

REPORT OF CASES

CASE 1.—G. M. White, male, age one year. Was bitten on an arm and a leg while lying in its crib during the early evening hours, and within one-half hour the patient's body was covered with urticarial wheals. After one hour the axillary temperature was 103 degrees Fahrenheit. Hot magnesium sulfate compresses were applied to the site of the bites which, in twelve hours, were greatly swollen. For three days the temperature remained near 103 degrees, the tongue was swollen, and the child was very lethargic. On the fourth day the temperature returned to normal and the manifestations of allergy disappeared, but the lethargy remained for two weeks. The local lesions became chronic ulcers, which healed in about three months.

CASE 2.—J. H. White, female, age 34, housewife. Was bitten on the right hand while in bed at night. The immediate symptoms were dyspnea, headache, vomiting, fever (102 degrees) and generalized urticaria, which persisted for over two hours. The following morning the patient was normal except for marked swelling of the affected hand, which subsided in three days.

CASE 3.—B. J. H. White, female, age 9. Was bitten on the right cheek at 1 a. m. while asleep in bed. She was

immediately seized with vomiting, headache, fever, and a generalized urticaria. After about one-half hour she became lethargic and could be awakened only with difficulty. By morning the symptoms had subsided. The affected cheek remained swollen for three days.

CASE 4.—M. H. White, female, age 65, housewife. Was bitten on the arm at 7 p. m. while sitting on a chair under a tree in her yard. She immediately became nauseated, developed a fever (102 degrees), chills, and generalized urticaria. The tongue was swollen and made talking nearly impossible. The immediate symptoms disappeared gradually after two hours except for the fever, which persisted for two days. The site of the bite on the arm was swollen and painful for one week.

COMMENT

Specimens of these insects were taken, some while in the act of biting, and sent to Dr. W. B. Herms, head of the Department of Entomology and Parasitology of the University of California, for identification. He found them to be *Paratriatoma hirsutus* Barber, recently described members of a family of blood-sucking, cone-nose, many of which are vectors of Chaga's disease or American trypanosomiasis, most commonly seen in South America. The cases cited, however, have no resemblance to Chaga's disease. After observation for approximately one year, these patients have shown no further symptoms and no demonstrable pathology. No more of the insects have been found.

115 E Street.

HIGH VITAMIN THERAPY FOR THE RELIEF OF TIC DOULOUREUX

By EDWARD MATZGER, M. D.
San Francisco

THE original clinical research of Dr. Henry Borsook, professor of biochemistry at the California Institute of Technology, for the treatment of tic douloureux¹ was so brilliant and conclusive that I took advantage of the opportunity to use it on two patients.

The "Borsook technique" is: To commence treatment with daily intravenous injections of 10 milligrams of thiamin chlorid. This is supplemented by 7½ to 10 U. S. P. units of liver extra intramuscularly, three times weekly. In addition, we prescribe 6 drams of the rice bran extract, marketed by Galen Company of Berkeley, California. This material contains the whole B complex and affords 200 I. U. of B₁ to the dram. The patients are placed on high vitamin low carbohydrate diet, and are asked to supplement the A and D intake by taking one of the fish-liver oils in moderate amounts. The latter is perhaps not necessary, but it gives a better balance.

We find that progress is very slow. There may be no significant reduction in pain for two or three months. For those patients who show no response in three months, we increase the dose of thiamin chlorid to 100 milligrams daily. Treatment is continued in all cases until the patient is free of pain for two months. The daily injections are then

¹ J. A. M. A. In press.

tapered off by giving, first, three a week, then two a week, then one a week, over the course of several months. Even after that relapses may occur, but these usually respond to short periods of intensive treatment."

I have modified this in that I secure adequate vitamin A intake by having the patients take a can of S & W carrot juice three times a week. (S & W contains 24,000 units of vitamin A per can.)

REPORT OF CASES

CASE 1.—Mrs. J. H., age 59. Has had typical tic douloureux symptoms on the right side of her face since 1932; pain under right eye, angle of mouth, and temple. The character of the pain is sharp, and shooting pains recur at very frequent intervals. She had four alcohol injections: the first one, in 1933, was followed by eighteen months' partial relief; the second injection, in 1935, with less than six months' partial relief; the third, in 1937, and the fourth, in 1938, with no relief of pain, although there was an annoying anesthesia. On February 2, 1939, I started in with the "Borsook technique" and there was continuous improvement from the start. In June, July, and August there was a complete cessation of pain, and the patient discontinued treatment. Within a week from the beginning of the treatment she experienced a feeling of well-being, had increased appetite, normal bowel movements, and abundant energy. She was able to eat without pain, and thought she was entirely cured. There was a relapse, however, in November, 1939, which responded slowly to additional therapy. While she is not completely free of pain now, life is bearable, and there are no further thoughts of suicide.

CASE 2.—Mr. W. W. P., age 59. Atypical bilateral neuritis with muscular twitching. Onset, twelve years ago. Trigger area was on left side of lower lip, and pressure or cold wind, or eating or talking, would cause shocks of pain, radiating from trigger area to temple. Totally incapacitated since 1934. The right side was injected in November, 1938, with only two months' relief of right-sided pain. The patient came in for treatment on June 2, 1939, and under the "Borsook technique" was progressively better until 100 per cent relief of pain was secured in August of 1939. Since this period he has remained symptom-free on "Galen B" by mouth alone, and the twitching is greatly diminished. Last examined on February 1, 1940, and has suffered no relapses.

COMMENT

This high vitamin regimen has relieved the pain of tic douloureux in these two patients, and has banished thoughts of suicide from one patient (Mrs. J. H.), and made life worth living for the other. In addition to the relief of pain, there was a marked improvement in general health and nutrition. This second feature was so striking that I have used this identical technique in the treatment of other groups of patients. These findings will be reported later.

909 Hyde Street.

FURUNCLES AND CARBUNCLES*

By JOHN BLEMER, M. D.
Danville

IN a general practice there is occasion to treat many cases of furuncles and carbuncles. Not believing in the immediate incision method of treatment for these infections, an ultra-violet light

* A comparative study of the treatment of furuncles and carbuncles by ultra-violet light, and the thin window bactericidal lamp.

routine has been used for the past six or seven years, and has brought about the discard of the scalpel and excellent results. In consideration of the degree of pain and length of time required for recovery, it makes for fewer dressings and less loss of time as well as less danger of spread of infection or resultant scarring than results from crucial, stellate or other types of incisions.

There are all gradations of furuncles and carbuncles, depending upon the site and previous treatment before seen by the physician. In considering the carbuncle as most severe, it is usual that hot compresses or home-remedy poultices have been applied and the area has "come to a head," but is not fluctuant. Immediately it is washed with an alcohol swab and exposed to ultra-violet light at a distance of 10 to 14 inches for two or three minutes. The surrounding area must be protected with toweling and the light directly centered over the carbuncle. Care must be taken to prevent harsh or unnecessary erythema. Following the exposure a salve, composed of ergot, 10½ grains, phenol, 7½ grains, zinc oxid 22½ grains in a suitable base, is applied with a sterile gauze dressing. Usually two of these treatments are sufficient to soften the entire area, and the central cores are easily picked out with sterile forceps. Any bleeding from the surrounding skin or central core is an indication to stop removal of necrotic tissue. During the next few days the area drains and heals. Dry dressings are changed daily while the drainage is present. The simpler furuncles may be quickly aborted following this routine. Following are a few of the typical cases treated in the past two years:

Name	Diagnosis	Number of Treatments	Exposure in Minutes	Results
B. R.	Furuncle, neck	3	3	Cured
B. O.	Furuncle, neck	2	2.5	Cured
R. L.	Furuncle, forearm	4	4	Cured
E. L.	Furuncle, thigh	3	4	Cured
M. J.	Furuncle, cheek	2	3	Cured
E. I.	Furuncle, arm	3	3	Cured
E. R.	Furuncle, elbow	2	3	Cured
A. L.	Furuncle, abdomen	3	2.5	Cured
A. K.	Furuncle, jaw	3	4	Cured
M. I.	Furuncle, forearm	3	5	Cured
M. F.	Furuncle, abdomen	2	2.5	Cured
C. E.	Furuncle, neck	3	4.5	Cured
M. C.	Furuncle, wrist	2	4	Cured
E. S.	Furuncle, hand	2	4	Cured
W. C.	Furuncle, upper lip	5	2.5 or 3	Cured
J. C.	Furuncle, lip and chin	6	2.5 to 8 min.	Cured
W. M.	Furuncle, upper lip	2	3	Cured
F. M.	Carbuncle, neck	4	4	Cured
A. G.	Carbuncle, neck	5	4	Cured
J. J.	Carbuncle, thigh	4	4 to 8	Cured
E. K.	Carbuncle, neck	5	5	Cured

COMMENT

In the past few years there has been produced a thin window bactericidal lamp, combining ultra-violet and infra-red qualities. This type of lamp eliminated the very objectionable features of the old quartz mercury lamp by limitation of the burning effect on the skin. The strong radiation of the thin window lamp in the bactericidal range of ultra-violet allows close approximation to the skin for much longer periods of exposure without danger of blistering or burning. This type of lamp has been used in my office routine the past three months, and its superior qualities over the older treatment are shown by the following cases.

Name	Diagnosis	Number of Treatments	Exposure in Minutes	Results
T. F.	Cellulitis folliculitis right fifth finger following thorn	5	10	Healed
J. D.	Furuncle, face	2	5	Healed
J. S.	Furuncle, scrotum	3	5	Healed
Miss W.	Furuncle, leg	3	5	Healed
J. S.	Carbuncle, neck	3	5	Healed
W. B.	Furuncle, knee	2	6	Healed
Mrs. T.	Furuncle, forehead	3	4	Healed

In the last two cases the patients were highly susceptible to sunburn. Neither are able to be exposed in swimming or outdoor work without blistering. There were small areas of scaling in both cases and the infection cleared rapidly.

HIPPOCRATES' APHORISMS*

By MOSES SCHOLTZ, M. D.
Arcadia

SECTION TWO (Continued)

30. When illness starts and when it dies,
Symptoms abate, but at the peak they rise.
31. When a convalescent's appetite is strong—
And yet he fails to gain—
It's an ill portent that something must be wrong.
32. The sick who hold their appetite in early stages
But do not gain, will lose it later on:
While those who lose their appetite quite early
Regain it later and profit thereupon.
33. It augurs well, if the patient's mind is sound,
And he accepts all food that's offered him;
But, if the contrary conditions do prevail,
The chances of recovery are slim.
34. There is less danger, if an illness is
In good accord with the patient's age, his
wonts,
His constitution and the current season;
If not, the patient greater risks confronts.
35. If the umbilical and hypogastric regions
Preserve their fullness, it augurs well indeed;
But if they are depleted, it's a bad omen,
And purging may to a disaster lead.
36. A healthy person quickly could
Impair his strength through purging or bad
food.
37. The purging drugs do ill assort
With persons whose health is their forte.
38. A food or drink, which is of lesser value
But is more palatable, is the one to choose
Rather than one, which is of greater value,
But which the patient's palate may refuse.
39. Old people do not have as many ailments
As do the young, but ailments of the old
Are apt to drag and last good many years,
Until the aged leave their earthly mold.
40. Catarrhs and inflammations of the nose
In the old people linger and ne'er close.
41. To those who suffer from attacks
Of fainting, frequent and severe,
Without an apparent cause,
A sudden death is ever near.
42. In a severe attack of apoplexy
A cure is almost impossible to get;
And even in a mild attack of it
The poor results are much too often met.
43. Of those who've been suspended by the neck
And are in state of coma, but not quite dead,
Those showing foamy bubbles at the mouth
Will not recover: they're on their death-bed.
44. Those who by nature are excessively obese
Much sooner than the slender ones de cease.
45. Epilepsy in the young is cured most often by
A change of air, of residence or mode of life
they try.
46. If a patient chances to develop pains
In two distinct and different locations,
The weaker pain diminishes and wanes.
47. All pains and fevers start and flare
More often at the time of pus formation
Than after pus is formed and settles there.
48. If body movements keep one ill-distressed
Because of pains, he can be eased by rest.
49. Those who are well accustomed to hard
labors,
Though sapped by lack of strength or waxing
years,
Do stand them better than the young and
strong,
Who are not used to toil—so it appears.
50. The things accustomed to are borne better,
Tho' they may be worse than the things un-
used;
Yet on occasion, if need be, a change
To a new thing cannot be well refused.
51. A change of any factor in the body,
Be it in feeding, purging, heat or cold,
Should be made gradually and slow,
As sudden and excessive things bring woe.
52. If a treatment, based on a well-considered
reason,
Does not produce the good effect it should,
The healer should not change his plan of
treatment,
As long as the indications still hold good.
53. Some laxity of bowels in youth
Is better than a constipated state.
But the reverse is true in later years,
When constipation's a near-normal rate.
54. A large body in young age is shapely and be-
coming,
But in old age it's untoward and speeds
succumbing.

* For other aphorisms, see CALIFORNIA AND WESTERN MEDICINE, March, 1940, page 125; April, 1940, page 179; May, 1940, page 231.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

CALIFORNIA MEDICAL ASSOCIATION†

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HENRY S. ROGERS.....President-Elect
LOWELL S. GOIN.....Speaker
PHILIP K. GILMAN.....Council Chairman
GEORGE H. KRESS.....Secretary and Editor

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OFFICIAL NOTICE

PROPOSED AMENDMENT TO CONSTITUTION OF CALIFORNIA MEDICAL ASSOCIATION PROVIDING FOR LIFE MEMBERSHIP*

Resolved, That Article IV of the Constitution of this Association, California Medical Association, be and the same hereby is amended by adding to Section 1 of said Article IV a new subdivision, namely, Subdivision (e), entitled "Life Members," and reading as follows:

"(e) LIFE MEMBERS

"Qualifications: Life members of the California Medical Association shall be elected by the Council on the recommendation of any component county society from those active members thereof who (1) have been active members of this Association continuously for a period of twenty (20) years or more and are more than fifty (50) but less than sixty (60) years of age and have tendered to this Association a life membership fee of one hundred fifty (150) dollars; or (2) have been active members of this Association continuously for twenty-five (25) years or more and are more than sixty (60) but less than sixty-five (65) years of age and have tendered to this Association a life membership fee of one hundred (100) dollars; or (3) have been active members of this Association continuously for a period of twenty-five (25) years or more, are more than sixty-five (65) but less than seventy (70) years of age and have tendered to this Association a life membership fee of fifty (50) dollars; or (4) have been active members of this Association continuously for twenty-five (25) years or more and are more than seventy (70) years of age. Those active members falling within Classification 4 need not be recommended by any component county society, but are eligible to life membership on direct application to the Council. The Council may not elect to life membership any active member whose membership has not been continuous or who has ever been censured, suspended or expelled from the American Medical Association, this Association, any state medical association which is a constituent unit of the American Medical Association, or any county medical society which is a component part of this Association or a unit of any other state medical association.

"Obligations and Rights.—Life members shall not pay dues and shall not be liable for assessments of any kind or nature. If active membership in good standing is main-

tained in his component county society, each life member shall have the right to vote, to hold office, and shall have all other rights and privileges of the Association. If active membership in his component county society is not maintained, the rights and privileges of a life member shall be those of a retired member."

COMMITTEE ON PUBLIC HEALTH EDUCATION†

The Committee on Public Health Education reports progress on two projects of major importance—the essay contest for high school and junior college students, and plans for a motion picture, depicting the modern beneficial phases of the practice of medicine, to be shown before schools and organizations.

During the past month, approximately five hundred schools, including parochial schools, were notified of the essay contest, which closes on November 1.

Plans for a scenario-writing contest, upon which the motion picture will be based, are going forward and will be announced soon.

Several requests by the committee to the American Medical Association that the pamphlet, "A Chiropractic Catechism," be reprinted, exposing the fallacies of chiropractic, finally were successful and a supply of these pamphlets were ordered from the American Medical Association for distribution to college students under supervision of the college physician. This augments your committee activity, previously reported, of supplying college students with beneficial information regarding the medical profession.

The Committee on Public Health Education assumed the duty of handling publicity for the California Medical Association annual meeting at Coronado and reports a very successful outcome. San Francisco and Los Angeles newspapers, as well as San Diego papers and the wire news services, were represented at the convention and were aided in their work by the public relations counsel, Ross Marshall.

Prior to the convention, the Public Relations Counsel secured advance copies of many of the speeches and wrote advance stories on the same. This procedure resulted in additional favorable publicity.

The Committee exhibited a poster display at the convention, illustrating its work.

The Committee secured the services of Dr. Mast Wolfson of Monterey to speak before the Santa Cruz Kiwanis Club on April 30. Doctor Wolfson's talk was reported to have entirely reversed an unfavorable attitude on the part of some club members inspired by four previous speakers who had criticized the medical profession.

† The Committee on Public Health Education was established through Substitute Resolution No. 6 at the Del Monte annual session, May 3, 1939.

The Committee on Public Health Education consists of Frank R. Makinson, chairman, Oakland; Philip K. Gilman, San Francisco; Samuel Ayres, Jr., Los Angeles; Thomas A. Card, Riverside; Lowell S. Goin, Los Angeles; Junius B. Harris, Sacramento; Dewey R. Powell, Stockton; Harry H. Wilson (ex officio), Los Angeles. Mr. Ross Marshall is the Public Relations Counsel of the Committee, and may be addressed at 408 South Spring Street, Los Angeles (telephone TUcker 2312), or 244 Kearny Street, San Francisco (telephone YUkon 2212).

† For complete roster of officers, see advertising pages 2, 4, and 6.

* First printing of this constitutional amendment in April 1940 CALIFORNIA AND WESTERN MEDICINE Supplement, on page 44. See also June issue, on page 280.

Your Public Relations Counsel was instrumental in ending a dispute of three years' standing between the Los Angeles County Medical Society and newspapers of that county regarding professional cards.

The Public Relations Counsel also conferred with members of the medical society in San Bernardino County regarding unethical marketing of an alleged tuberculosis cure in that county and gave his advice as to the proper course to be pursued.

Talks explaining the program of the Committee on Public Health Education were made by the Public Relations Counsel before the Mendocino-Lake, Ventura, and Sacramento medical societies.

The Sonoma County Medical Society within the past few weeks inaugurated a weekly radio broadcast to continue for forty-eight weeks from the station at Santa Rosa, utilizing the set of approved American Medical Association speeches secured by the Committee on Public Health Education.—R. M.

CALIFORNIA PHYSICIANS' SERVICE†

California Physicians' Service is continuing to enroll members at a satisfactory rate. During the month of June approximately 2,000 new members were secured, bringing the present total to about 14,500. Payment of bills for services rendered during April has just been completed. The unit value for that month was \$1.25, a fact which gives the Trustees of California Physicians' Service a great deal of concern. A study is now being made of the services rendered during this and previous months to determine, if possible, what factors have contributed to the large number of units of service (9,900) rendered during the month of April. During January, February, and March, the large number of respiratory infections was primarily responsible for the volume of service rendered, and it was anticipated that during April there would be less of this type of care necessary, an anticipation which does not seem to have been realized. The monthly study being made will reveal the exact rôle played by respiratory infections in April, and further study will suggest possible changes in group selections, stricter adherence to our policy of non-liability for preëxisting conditions, etc. It is impossible to predict, but the hope is that experience for May will permit the payment of an increased unit value.

During its formative months, and in spite of the note on each bill form, California Physicians' Service has accepted bills for payment even though they were not received by the fifteenth of the month following the month in which the service was rendered.

With the present volume of business—1,500 patients per month seen by some 1,200 physicians—this practice can no longer be continued. *Therefore, effective for June bills, no bills will be accepted for payment and included in the computation of the unit value for any month unless they are received at the office of California Physicians' Service by the fifteenth of the month following the month in which the service billed for was rendered.*

Only in this manner can bills be paid expeditiously and office administrative expense be held within reason.

† Address: California Physicians' Service, 333 Pine Street, San Francisco. Telephone EXbrook 3211. Alison Kilgore, M. D., secretary.

Copy for the California Physicians' Service department in the OFFICIAL JOURNAL is submitted by that organization.

For roster of nonprofit hospitalization associates in California, see in front advertising section on page 3, bottom left-hand column.

In accordance with approval voted by the House of Delegates at Coronado, California Physicians' Service has proceeded with plans for the development of a program of medical care for public assistance recipients. The first step in this direction has been accomplished, namely, the inclusion in relief legislation enacted at the special session recently concluded of a provision authorizing relief officials to contract with a nonprofit agency for medical care. An excerpt from the Act reads as follows:

"Sec. 6.7. With money from this appropriation, not to exceed one per cent of the total sum appropriated, chargeable to the 82 per cent classification, the Relief Administrator and the Relief Commission may contract with any nonprofit medical or health service corporation organized under the laws of this State for the rendition of medical and health services to any person and his family eligible for assistance from this appropriation."

It is significant to report that legislators in both the Senate and Assembly, representing all schools of thought, received representatives of California Physicians' Service most favorably, and evinced considerable interest in the proposals made. The amount of money which could be used in accordance with the provision quoted above would not exceed \$220,000. This sum is not adequate to provide medical care to even the extent covered by the State Relief Administration during the last six years. However, the legislation places California Physicians' Service in a position of negotiating with the State Relief Administration, according to the intent of the legislature, for the provision of such services as may reasonably be produced with the appropriation available. Plans are now being worked out for the presentation of a proposal to the officials of the State Relief Administration.

COUNTY SOCIETIES†

CONTRA COSTA COUNTY

The regular monthly meeting of the Contra Costa County Medical Society was held on Tuesday evening, June 11, at the Hotel Carquinez, Richmond.

Program:

- 8:00 p. m.—Motion Picture: *Pentothal Sodium for Intravenous Anesthesia.*
- 8:45 p. m.—Business Session.
- 9:00 p. m.—Discussion: *Medical Care in Disaster Relief.* Mr. Henry M. Baker, Assistant Manager of the Pacific Branch Office of the American National Red Cross. His discussion included the place of the medical group in the disaster preparedness and relief picture.

The next meeting of the Society will be in September. There will be no meetings during July and August.

L. ABBOTT HEDGES, Secretary.



MENDOCINO-LAKE COUNTY

The June meeting of the Mendocino-Lake County Medical Society was held in the Redwood Coast Hospital, Fort Bragg, with Dr. Dallas L. Wagner presiding.

Doctor Wagner introduced Dr. Henry S. Rogers, President-elect of the California Medical Association, who gave a brief report of the annual session held at Coronado.

Mr. Ben Read, Secretary of the Public Health League, spoke on the legislation affecting the practice of medicine in California as dealt with in the last session of the Legislature.

A motion approving the coöperation of our State Senator and State Assemblyman, Mr. Biggars and Mr. Byrnes,

† For roster of officers of component county medical societies, see page 4 in front advertising section.

and recommending that letters of appreciation be sent to each of them was passed.

Mr. Ross Marshall of the California Medical Association Committee on Public Health Education gave a comprehensive talk regarding the work done by the Committee.

Dr. William Stegeman of Santa Rosa was then introduced. His subject was *Urology as It Presents Itself to the General Practitioner*. Numerous slides and x-ray pictures were used.

It was decided to hold the next meeting at Willits some time in August.

ROYAL SCUDDER, *Secretary*.



PLUMAS-LASSEN-MODOC

A meeting of the Plumas-Lassen-Modoc County Medical Society and ladies was held in the banquet room of the Grand Café in Susanville the evening of May 25.

Following a steak dinner, Dr. Martin Debenham of San Francisco gave a talk on *Immediate Suturing of Tendons in Traumatic Wounds*; a subject of great interest to the industrial surgeons of our district.

BERNARD S. HOLM, *Secretary*.



SAN JOAQUIN COUNTY

The regular meeting of the San Joaquin County Medical Society was held on June 6 at Pete's Place, Valley Springs. According to custom, this meeting was sponsored by and conducted by the Lodi members of the San Joaquin County Medical Society. Due to the absence of President Hugh Bolinger, Vice-President, Dr. Ray Owens was in the chair. Due to the nature of the meeting, there was no business presented. After a very enjoyable dinner, our guests of the evening were introduced. The guests were George H. Kress, Secretary of the California Medical Association; Karl Meyer, Director of the Hooper Research Foundation, University of California; Paul de Kruif, noted author; and Mr. Riley from Cleveland, Ohio. Each of the guests spoke briefly on various phases of politics and medicine. A brief report was given by Dr. Dewey Powell on the recent Coronado convention.

As usual, the Lodi members presented a very enjoyable evening, and the thanks of the County Society were given to the Roma Winery, Shewan-Jones Winery, and East Side Winery of Lodi for their share in the various festivities. The meeting was adjourned at 11:30 p. m.

G. H. ROHRBACHER, *Secretary*.



SOLANO COUNTY

At a meeting of the Solano County Medical Society held on Tuesday evening, June 11, in the office of President Madeley, it was voted that members of the Society should examine Girl Scouts, who should present to their family physicians their Girl Scout cards.

In recognition of the worthy purposes of the Girl Scouts movement, it was agreed that our members would not charge regular fees for the examinations.

However, since the representatives of the Girl Scouts had stated the sum of 75 cents per examination could be paid, it was agreed that this should be paid by the Girl Scouts organization to the Solano County Medical Society.

The Solano County Medical Society, in turn, would then donate the sum so received to the local Red Cross; the reduction in the professional fees and the donation to the Red Cross being an expression of the willingness of the Society to cooperate in the good work.

JOHN W. GREEN, *Secretary*.

VENTURA COUNTY

The regular meeting of the Ventura County Medical Society was held at Satcoy on Tuesday, May 14, with Doctor Barker presiding, and eighteen members and six guests present.

Dr. W. S. Clark introduced Dr. Charles Lamb of Santa Barbara, who spoke on *Acrodynia*.

The meeting for June is to be a joint one with the Auxiliary, dentists, druggists, and nurses of the county.

A. A. MORRISON, *Secretary*.



YUBA-SUTTER-COLUSA

The first meeting of the reorganized Yuba-Sutter-Colusa County Medical Society was held at the Hotel Marysville on Tuesday evening, June 4, with Dr. Benjamin F. Miller presiding.

Of the six members of Colusa County, Doctors Charles F. Keith, Joseph E. Tillotson, and G. W. Desrosier were introduced and welcomed into the new Yuba-Sutter-Colusa unit (formerly the Yuba-Sutter County Society). Doctor Keith has for some time been the president of the Yolo-Glenn-Colusa County Medical Society, and Doctor Desrosier the retiring City Health Officer of Colusa.

Visitors present were: Doctors Cary of Gridley, Fratis of Yuba County Hospital, Lentz of Sutter County Hospital, and Frank MacDonald of Sacramento, Councilor of the Eighth District of the California Medical Association, who gave us a brief report for the Association Council, explaining its reorganization to lighten the work of the Secretary's office. Doctor MacDonald stressed (1) that the county medical societies in northern California are generally poorly organized over an area comprising of around 400 square miles of territory. And that at the recent meetings of the California Medical Association at Coronado no county society north of our local society sent a delegate to the convention. Dr. Stanley Parkinson, the Yuba-Sutter delegate, was present at this convention, but at present is on vacation.

(2) That a Woman's Auxiliary to the Medical Society should be formed locally. Doctor MacDonald explained the work of such an organization and stated that our society is one of the few in the State in which a Woman's Auxiliary has not been organized. It was decided to begin working on a plan to interest wives of local physicians in forming a Woman's Auxiliary.

George Halkyard, retired local druggist, was present and presented a plan for a physicians' telephone exchange, which would be conducted to handle calls especially in the doctors absence, and in case of emergencies. This was taken under advisement by the Society.

President Miller stated that the local Chamber of Commerce have asked for a joint meeting with the Medical Society, having the Medical Society put on the program at the meeting. President Miller appointed Dr. John Duncan to work out the details for such a joint meeting.

A speakers' bureau was discussed by Councilor MacDonald and Doctors Hamilton, Swift, Miller, and Loomis. The plan is to set up a speakers' bureau, to be composed of physicians who are capable and willing to talk on medical subjects before other clubs and organizations in the community which frequently call upon members for such speeches.

A letter from the Yuba-Sutter League of Women Voters was read by the Secretary, which related to a petition to the mayor and members of the Council of the city of Marysville, requesting that "Marysville shall operate under the Yuba-Sutter Bi-County Public Health Unit."

The Health Department of the city of Marysville was discussed by Doctors Kimmel, Hennessy, and Miller, and

the Society as a whole strongly favoring coöperation of the city of Marysville in the establishment of a public health unit.

Dr. R. Lucian Hamilton, Chairman, reported for the Hospital Relations Committee and stated that, due to the new law which prohibits hiring nonregistered nurses, the situation is becoming very acute, and that it is impossible to secure an adequate number of qualified nurses for the Yuba County Hospital.

Reference was made to the fact that the resident physician at the county hospital is not adequately covered with malpractice insurance and that steps are being taken to secure proper coverage. Ward rounds are held at the Yuba county hospital every Friday morning at 9 a. m., and all local and visiting physicians are urged to attend. Doctor Hamilton further mentioned that a physician must register in every county in which he practices his profession.

Dr. Philip Hoffman, Chairman, reported for the Tuberculosis Committee, stating that the supervision of the work had been delegated to Doctor Linstrum. Doctor Linstrum reported that Doctor Hoffman had completed skin testing in the high school in Marysville, and that Doctor Didier had done the skin testing in Wheatland. Doctor Desrosier reported on the work done at Colusa last fall. Doctor Keith stated that they have carried out a complete tuberculosis program in Williams this spring. Doctor Hennessy stated that the tuberculosis program and the Tuberculosis Association in Yuba County are now functioning very fine and coöperating smoothly with the Public Health unit, but that Sutter County is not coöperating. Request was made that the Medical Society instruct its secretary to write to the Sutter County Tuberculosis Association, asking that they express to us their policy. It was so ordered and subsequently a letter was sent to the president of Sutter County Tuberculosis Association. Doctor Hennessy further stated that it would facilitate the work of the tuberculosis examinations if the x-rays were filed in a central location and offered to file them in his department. Dr. Romaine B. Whitney reported on the Yuba-Sutter Venereal Clinic and stated that this clinic was newly organized and functioning smoothly, but he vigorously condemned the Social Service of the department as being inadequate and felt that it was endeavoring to build up as large a free clinic as possible without due regard to the fact that some of the patients were able to pay for the services rendered.

Doctors Delamere and Duncan reported for the Agricultural Workers' Health and Medical Association Migrant Camp Clinic, south of Yuba City.

The speaker of the evening, Dr. Sterling Bunnell of San Francisco, discussed *Reconstruction of Hands*. Doctor Bunnell illustrated his treatment and handling of injured hands by lantern-slide drawings and actual photographs before reconstruction and following to show the results obtainable.

The meeting was adjourned, and is at the call of the President during the summer months. Following the meeting a supper was served. LEON M. SWIFT, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (60)

Alameda County (5)

B. K. Christopoulos, *Oakland*
Lella Stevens Craig, *Berkeley*
Ernest O. Gunderson, *Berkeley*
Harry P. Krummes, *Oakland*
Walker M. Wells, *Oakland*

Butte-Glenn County (1)

C. M. Guernsey, *Chico*

Fresno County (2)

William H. Riley, *Fresno*
Lawrence A. Solberg, *Kerman*

Los Angeles County (22)

Albert J. Campbell, *Pasadena*
Thomas P. Downey, *Los Angeles*
Clifford Earl Easley, *Torrance*
Sigrid Ann Esbern, *San Fernando*
Don B. Gibboney, *Los Angeles*
Willard M. Gobbell, *Van Nuys*
Carl F. Grunewald, *Pasadena*
Frederic W. Haigh, *Los Angeles*
Trestler S. Harris, *Los Angeles*
Willis L. Jacobus, Jr., *Los Angeles*
A. Laurence Kiefer, *Los Angeles*
Grant Lund, *North Hollywood*
David A. McCoy, *Los Angeles*
Cyril L. Mitchell, *Santa Monica*
Clyde V. Nelson, *Van Nuys*
Leslie S. Orleans, *Los Angeles*
Paul H. Osiek, *Pasadena*
Charles E. Pancoast, *Los Angeles*
Maurice S. Priver, *Los Angeles*
Bernard H. Rosser, *Los Angeles*
Ruth J. Temple, *Los Angeles*
Julius Ziegler, *Los Angeles*

Sacramento County (1)

Erle M. Blunden, *Fair Oaks*

San Diego County (4)

John W. Flaiz, *Vista*
John Crawford Holman, *San Diego*
Saul Ruby, *San Diego*
A. Ragnar Stadin, *National City*

San Francisco County (11)

Robert B. Aird, *San Francisco*
Dana V. Clark, *San Francisco*
John F. Huffman, *San Francisco*
Helen Marie Johnson, *San Francisco*
Richard D. Loewenberg, *San Francisco*
James Clifford Long, *San Francisco*
Charles Dalliba Marple, *San Francisco*
John M. Nagle, *San Francisco*
Samuel R. Sherman, *San Francisco*
Philip Vogel, *San Francisco*
Otto R. Wallerstein, *San Francisco*

San Luis Obispo County (3)

Gilbert S. Coltrin, *San Luis Obispo*
C. C. Najjar, *San Luis Obispo*
Edward C. Sherman, *San Luis Obispo*

Santa Clara County (2)

Gordon Billingsley, *Saratoga*
H. Weldon Wilkinson, *San Jose*

Santa Cruz County (1)

John D. Fuller, *Santa Cruz*

Sonoma County (4)

Ralph V. Harr, *Santa Rosa*
William N. Makaroff, *Guerneville*
William E. Rogers, *Santa Rosa*
Thomas M. Torgenson, *Santa Rosa*

Stanislaus County (1)

James E. Thompson, *Newman*

Tulare County (2)

William S. Neal, *Visalia*
Roy F. Ruth, *Woodlake*

Yuba-Sutter-Colusa County (1)

Charles B. Kimmel, Marysville

Transfers (3)

George F. Keiper, Jr., from Los Angeles County to Tulare County.

Henry John Lane, from San Francisco County to Santa Clara County.

Richard A. Westsmith, from Los Angeles County to San Diego County.

In Memoriam

Vener, Hyman Israel. Died at Los Angeles, May 23, 1940, age 40. Graduate of the University of Illinois College of Medicine, Chicago, 1925, and licensed in California the same year. Doctor Vener was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✦

OBITUARY**Rexwald Brown***

1878-1940

Dr. Rexwald Brown, a physician and surgeon who applied the spirit of his profession's great oath of service to the whole scope of his living, died in his Santa Barbara home Friday morning.

Throughout his life he fought vigorously for what he thought was right, without malice toward his opponents and without expecting reward from his cause. He accepted his unusual abilities and his many opportunities as responsibilities. His great reward was an unlimited capacity for kindly friendship.

For many years Doctor Brown served on Santa Barbara city and county boards, commissions, and committees. He did not count the cost in time and energy. He did not stop to consider the effect of an unpopular cause on his personal affairs. As a citizen his attitude toward unhealthy public growths and conditions was the same as his attitude, as a surgeon, toward disease. He accepted knowledge and conviction as responsibility. He did not hesitate to do the best he could because he might escape responsibility by doing nothing.

When such a man dies it is not necessary to say that he was beloved. To the credit of mankind, such a character is always beloved—and, more than that, it is respected.

Evidences of Doctor Brown's contributions to his community will live long in Santa Barbara's health service, organized charities, juvenile courts, public improvements, and planning for the future. Equally long-lived and equally important will be his example and inspiration to his associates in public service. He taught people to be ashamed of compromise bought at the price of self-respect. He gave people courage to say unpleasant things that had to be said before more pleasant things could be accomplished. Among Santa Barbarans most active in public service he became a symbol of courage that is so costly to personal comfort and ease, and so necessary to welfare and progress.

Doctor Brown came to Santa Barbara in 1906 at the age of 28. He crowded a lot of living into the thirty-four

* Under the caption, "Dr. Rexwald Brown, Physician and Surgeon—and 'Warrior,'" the Santa Barbara News-Press of June 22, 1940, printed as its leading editorial the article which appears as an obituary in this issue of CALIFORNIA AND WESTERN MEDICINE. Doctor Brown, whose death occurred on June 21, 1940, was known throughout California as the founder of the Santa Barbara Clinic.

years that followed. Long before his age warranted it he was known to his friends as "Dear Old Rex." He attained the finer fruits of age—fair judgment, kindness to the stupid and ignorant, and ability to accept delay without thinking of defeat—long before they come to most men.

For Doctor Brown his friends and his community can offer only one fitting tribute—the will to carry on.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

MRS. A. E. ANDERSON.....President
MRS. WILLIAM C. BOECK.....Chairman on Publicity
MRS. KARL O. VON HAGEN.....Asst. Chairman on Publicity

In Memoriam

There is a shadow in our day. Since last we gathered, five of our members have gone to that other shore.

Shelley has said:

"They are not dead, death is but a low mist which cannot blot the brightness it may veil. They have but outsoared the shadow of our night. They are secure from the contagion of the world's slow stain. They are one with nature, their voices we may hear in the music of the wind, the sea and the night's sweet bird, their tears are in the falling rain. Their presence is felt and known in darkness and in light, from herb and stone their souls, like stars, are beacons from the abode where the Eternal are."

There is no death. No star is set but it rises to shine again in a brighter dawn.

We pay tribute to:

Alameda County: Mrs. Harry B. Torrey, July 22, 1939.

Orange County: Miss Rose Love Boyd (sister of Doctor Boyd), August 19, 1939.

Riverside County: Mrs. B. E. Garrison, August 23, 1939.

Monterey County: Mrs. A. A. Arehart, June, 1939.

San Joaquin County: Mrs. Dewey R. Powell, September 13, 1939.

MRS. E. ERIC LARSON.

Component County Auxiliaries*Alameda County*

The final meeting of the season for the Alameda County Auxiliary was held on May 17 at the Claremont Country Club. The mothers of physicians and members were honored. Hostesses for the day were Mrs. Charles Dukes, Mrs. George Reinle, and Mrs. E. N. Ewer.

Following luncheon, Mrs. George Calvin, who concluded a happy and successful year as president, gave a report of the activities of the organization. The newly elected officers were installed, and Mrs. Ira Church assumed her new responsibilities as president. Mrs. F. J. Carlson reported on the convention at Coronado.

Mrs. Milton Shutes and Mrs. Roy Nelson arranged the program, which was contributed to by Jean Gray Hargrove, pianist; Mary Clyde Cortright, contralto; and Rose Bell, impersonator.

MRS. RENE VAN DE CARR, *Publicity Chairman.*

† As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Karl O. Von Hagen, Assistant Chairman on Publicity, 5367 Whitworth Drive, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Von Hagen and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the Editor to allocate two pages in every issue to Woman's Auxiliary notes.

Los Angeles County

The last regular session of the Woman's Auxiliary to the Los Angeles County Medical Association was held on Tuesday, May 28, at the Association headquarters, 1925 Wilshire Boulevard. This was a "Bring Your Husband" meeting, and we were honored to have a number of the doctors present at luncheon.

The program arranged for the occasion included an exhibition of the color film, *Arizona*, through the courtesy of the Union Oil Company.

Mrs. Arthur T. Newcomb presented the Dolores M. Barrow Memorial Library to the library of the Los Angeles County Medical Association.

The members of the Board and committee chairmen gave their annual reports. Officers for the coming year were installed. MRS. WILLIAM BENBOW THOMPSON.

*Marin County*

On the evening of May 23, the Marin Auxiliary held its last meeting of the fiscal year. It brought to a close a year unusually stimulating and interesting, due in a large measure to the personality of our president, Mrs. C. A. De Lancey. During her administration the attendance at meetings was high, and the annual bridge tea and Auxiliary play were most successful. It is with regret that we realize the year is over; but to most of us, looking back, it will stand out "like silver in the sun."

Our guest speaker was Mr. Nyles Christiansen of the American Red Cross, who told us of the work now being done by that organization in Poland, Holland, Belgium, and France.

Mrs. Harry O. Hund, President-Elect of the California Medical Auxiliary, gave us a résumé of the convention at Coronado.

The following officers for the coming year were unanimously elected: Mrs. Lloyd Tyler, president; Mrs. Harry Hensler, first vice-president; Mrs. John C. W. Taylor, second vice-president; Mrs. E. V. Knapp, secretary; Mrs. George Lowell, treasurer.



On Sunday, June 2, the Woman's Auxiliary to the Marin County Medical Society entertained their husbands at a barbecue, which took place at the summer home of Dr. and Mrs. Wilson Goddard on Bolinas Bay. On the committee for this last social event of the season were Mrs. Wilson Goddard, Mrs. Alfred Schwarz, Mrs. Alex Miller, and Mrs. John C. W. Taylor.

Mrs. Frank Lowe presented Mrs. C. A. De Lancey, the retiring president, with a gift from the members of the Auxiliary.

Following luncheon in the outdoor dining room, games were played. MRS. JOHN C. W. TAYLOR.

*San Diego County*

Forty-seven members of the Woman's Auxiliary to the San Diego County Medical Society met on May 14 at the University Club. Mrs. William Cooke, President, presided.

This was the last business meeting of the year, and all annual reports were read.

The guest speaker for the day was Dr. L. F. Conti, former doctor for the San Diego Zoo. The subject for his very instructive talk was *Medical Observations of Wild Animals and Birds*.

The following officers were elected for 1940-1941: Mrs. R. Emerson Bond, president; Mrs. E. H. Kelley, first vice-president; Mrs. Elmo Crabtree, second vice-president;

Mrs. James A. May, secretary; Mrs. E. H. Christopherson, treasurer; Mrs. W. M. Alberty and Mrs. Joseph Maguire, members-at-large.

MRS. J. J. O'HARA, Secretary.

*(Press Clippings Continued from Page 47)***W. S. Franklin, M. D., Congressional Candidate in Tenth California District**

Dr. Walter Scott Franklin will seek election as congressman from the tenth congressional district. Shortly before noon today, the last hour for filing nomination papers in the August primaries, his petitions will be filed in each of the five counties that make up the tenth district—Santa Barbara, San Luis Obispo, Ventura, Kern, and Tulare. He will run on both the Republican and the Democratic tickets.

The fact that Doctor Franklin ran far ahead of his ticket as candidate for lieutenant-governor in California's last gubernatorial election to a total of some 1,200,000 votes, and that he was most prominently mentioned as a candidate for governor when a recall election seemed certain, caused him to receive many requests to enter the congressional race. He delayed his final decision in the matter until the last minute. The circulation of his petitions was not begun until the last minute for filing was only a few hours away. . . .—Santa Barbara News-Press, June 22.

**Doctors of Medicine and Rhythm to Play**

"California Rhythm Doctors," that group of medics who have a talent for music, announce their first annual party to be held at the Hotel Claremont on Wednesday evening, May 22, when Bay society is invited to hear them. The band, incidentally supposed to be the only doctors' swing band in the country, will alternate with the orchestra in playing both for the dinner and entertainment.

Guests of honor for the evening will be Dr. and Mrs. Charles A. Dukes and Dr. and Mrs. Robert Thayer. Doctor Dukes is the president of the California State Medical Association and Doctor Thayer president of the California State Dental Association. Together with Mrs. William Harold Oliver, Mrs. A. A. Alexander and Mrs. T. Leslie Brown, they will sponsor the dinner-dance.

Fifteen hundred invitations will be mailed for the party. The purpose of the event is to raise money for the treasury so that when the players fill engagements which are purely for pleasure of their friends the financial burden will not fall upon any one member. It is expected that this will cover the year's activities.

Some of the affairs at which the doctors have donated their services for charity and other events are the Children's Hospital benefit, the American Medical Convention, the dinner-dance for the Woman's Auxiliary of the San Francisco County Medical Society, and the doctors' and lawyers' banquet at the Athens Athletic Club.

The California Rhythm Doctors include Doctors Wirt Miller, Roberto Escamilla, Fred Fisher, Edward Greer, Charles Greenwood, Frank Helfrich, Forest L. Horner, Lloyd Kindall, Jefferson Larkey, Norman Leet, H. A. McPherson, C. Martin Mills, Lowell Peterson, Thomas Robinson, Henri Sheffoff, Robert Taylor and Alfred Wollitz.—Oakland Tribune, May 12.

**California Women Extend Cancer Drive Another Month**

San Francisco.—Continuation of the membership campaign of the Women's Field Army of the American Society for the Control of Cancer through May was announced today by Mrs. Paul Alexander of Redwood City, California, commander of the organization.

The annual fund-raising campaign has just been completed.

"Education of the public in the curative possibilities of cancer, through increased membership, is the best way to prevent more deaths through cancer in the United States this year than probably will occur in the European war," Mrs. Alexander said.

Into Smaller Towns

The membership campaign will be emphasized in the smaller communities of California where the organization has not yet reached, according to Mrs. Alexander.

Chance for Service

Ordinary membership in the American Society for the Control of Cancer carries nominal dues, Mrs. Alexander pointed out, and provides a wonderful opportunity for service to humanity. "The best outlet for the thousands of pieces of informative literature we can distribute about cancer is through members," she said. "With one or more members in every community, we will have made great strides towards banishing one of the leading causes of untimely death in our nation."—Riverside News, April 30.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-Five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings.

California Medical Association, Hotel Del Monte, Del Monte, California, May, 1941. (Exact date not decided.)

Western Section of the American Urological Association, Empress Hotel, Victoria, B. C., July 29-31, 1940. Dudley P. Fagerstrom, M.D., Secretary, 710 Medico-Dental Building, San Jose, California.

Medical Broadcasts.*

American Medical Association Broadcasts: "Medicine in the News."—The American Medical Association and the National Broadcasting Company have announced "Medicine in the News," on timely topics from medical news of the week. Thursdays, 4:30 p. m., Eastern standard time (1:30 p. m., Pacific standard time), Blue Network, coast to coast. Thirty weeks. Opened on November 2, 1939. Facts, drama, entertainment, music.

Pacific States:

KECA	Los Angeles	KTMS	Santa Barbara
KFSD	San Diego	KEX	Portland
KGO	San Francisco	KJR	Seattle
	KGA	Spokane	

Los Angeles County Medical Association.

The radio broadcast program for the Los Angeles County Medical Association for the month of July is as follows: Wednesday, July 3—KECA, 11:15 a. m., The Road of Health; Saturday, July 6—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You. Wednesday, July 10—KECA, 11:15 a. m., The Road of Health. Saturday, July 13—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You. Wednesday, July 17—KECA, 11:15 a. m., The Road of Health. Saturday, July 20—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You. Wednesday, July 24—KECA, 11:15 a. m., The Road of Health. Saturday, July 27—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You. Wednesday, July 31—KECA, 11:15 a. m., The Road of Health.

Census Reports on United States Birth Rates.—The United States birth rate dipped slightly last year after rising in 1937 and 1938, according to preliminary tabulations of the Census Bureau, Department of Commerce.

A total of 2,262,726 births occurred last year, resulting in a birth rate of 17.4 births per each 1,000 estimated population. In 1938, the birth rate was 17.6, based on 2,286,962 births. The rate in 1937 was 17.0.

The preliminary 1939 rate is approximately 5 per cent higher than the lowest birth rate recorded in the history of the birth registration area established by the Census Bureau in 1915. The low point was in 1933, when the rate was 16.5. The rate for California in 1938 was 16.5; in 1939, was 16.8.

* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

University of California Courses to Help Teachers of Hard of Hearing.—Training courses for teachers of the hard of hearing and the deaf will be offered by the Los Angeles Summer Session of the University of California this year, with courses available in speech-reading, directed practice and conservation of speech and hearing, according to Dr. J. Harold Williams, dean of the session.

Information concerning all summer activities on the Los Angeles campus of the University may be secured on request of the Dean of the Summer Session, 405 Hilgard Avenue, Los Angeles.

Death Rates in the United States.—A slight rise in the United States death rate last year, as compared with 1938, is reported by the United States Bureau of the Census in a preliminary tabulation for 1939.

A total of 1,387,797 deaths last year resulted in a preliminary mortality rate of 10.7 deaths per 1,000 estimated population. In 1938, there were 1,381,391 deaths and the death rate was 10.6. The death rates for 1938 and 1939 were the lowest rates, with the exception of 1933, reported since the death registration area was established in 1900. California's death rate in 1938 was 12.4; in 1939, was 12.5.

American Red Cross: Summer Safety Is Subject of Dramatized Broadcasts.

—In an effort to save thousands of lives and prevent tens of thousands of injuries during the next several months, the American Red Cross has arranged a series of eight dramatized radio programs on highway safety, prevention of drownings, and other mishaps. This summer safety series, which will be broadcast under the title of "Listen and Live," will be heard at 12 to 12:15 p. m., Eastern standard time, Sundays, from June 2 through July 21. Each of the programs will be closed with a brief talk by a nationally prominent guest.

The dramatized portion of each broadcast will be prepared under the direction of the First Aid, Life Saving and Accident Prevention Service of the American Red Cross. Each will graphically cover specific methods of avoiding accident and will emphasize what the hearer should do and what he should abstain from doing in case he runs into danger or meets with mishap, either to himself or others.

During the past thirty years this Red Cross service has given instruction in first aid to more than 2,000,000 persons and has taught more than 1,000,000 proper methods of rescuing persons in danger of drowning and reviving those apparently drowned. More recently it has been actively fostering farm and home safety by every possible means. From its extensive experience, vivid incidents will be drawn, incidents that will bring home to the hearer in a telling manner why the mishap in question occurred, how it and similar ones could be avoided and what might be done to relieve the situation. This safety series will be sent out over the Blue Network of the National Broadcasting Company, co-sponsor with the American Red Cross of this unique venture in humanitarianism.

Following is a list of California stations over which the series will be heard:

Blue Coast Group—KGO, San Francisco; KECA, Los Angeles; KTMS, Santa Barbara; KFSD, San Diego.

Medical Laboratory Technicians.—The California Association of Medical Laboratory Technicians announces that it is now composed of eleven county chapters, and that it has its own publication, "The Filter." Its next annual session will be held in San Francisco, September 28-29, 1940. The president of the organization is Mrs. Berenice Stevens, care of Merritt Hospital, Oakland.

Postgraduate Psychiatric Education.—The first regional institute of the American Psychiatric Association was held at Agnew State Hospital, Agnew, California, from June 17 to 29.

Participants in the institute at Agnew State Hospital were Dr. Charles A. Rymer, Assistant Director of the Colorado Psychopathic Hospital; Dr. Spafford Ackerly, Professor of Psychiatry of the University of Louisville, School of Medicine; Dr. Wendel Muncie, Associate Professor of Psychiatry of Johns Hopkins University Medical School; Dr. Walter Treadway, Assistant Surgeon-General, United States Public Health Service; and Dr. J. Kasanin, Chief of Psychiatric Service of Mount Zion Hospital, San Francisco.

Dinner in Honor of Dr. James F. Percy.—A dinner honoring Dr. James F. Percy was given by the French Hospital staff, Los Angeles, April 27, following twelve years of service as its chief and for his constructive work in the interest of the hospital. Doctor Percy was presented with an illuminated scroll, commemorating this service. Dr. Thomas C. Myers, President of the Board of Trustees of the Los Angeles County Medical Association, who presided, made the presentation address.

Doctor Percy was graduated from the Bellevue Hospital Medical College, New York City, in 1886. . . .

With the years in practice Doctor Percy has witnessed many worth-while events between the past and the present trends in medicine.

From February to April, 1888, he treated thirty-five children for diphtheria and signed thirty-five death certificates. Every physician in that city (forty-two in number) had a similar experience with his treatment of diphtheria patients—not a single child recovered. Diphtheria antitoxin did not become available for the treatment of the disease until 1894.

About this same time Dr. Ernest Hart, then the brilliant editor of the *British Medical Journal*, toured this country, lecturing to medical men that typhoid fever was a water-borne disease. In 1882, Doctor Percy saw in the old Bellevue Hospital, in the clinic of the then senior physician, Austin Flint, what was said to be the first demonstration of Koch's technique for staining tubercle bacilli. This was an extraordinary event and almost a spiritual experience for everyone who witnessed it. . . .

Among some of the recognitions that have come to honor Doctor Percy were the presidency of the Illinois State Medical Society, 1907; President Tristate (Illinois, Iowa, and Missouri) Medical Association, 1910; a founder member of the American College of Surgeons in 1913; a founder member of the Malignancy Board, Los Angeles County Hospital from 1922 until the present. This was among the first of these boards established in this country for the study and better care of the cancer patients. . . .

Many messages were received from colleagues over the country, among them Doctors Rock Sleyter, President of the American Medical Association; George H. Kress, Secretary of the California Medical Association; Malcolm T. MacEachern, Associate Director of the American College of Surgeons; Morris Fishbein, Editor of *The Journal of the American Medical Association*; Bowman Crowell of the American College of Surgeons; and others.

Examination for Appointment as Commissioned Officers in the Medical Corps of the U. S. Navy.—The next examination for doctors of medicine desiring to enter the Medical Corps of the United States Navy will be held on August 19, 1940, at the following Naval Medical Department activities (Pacific Coast):

U. S. Naval Hospital, San Diego, California; U. S. Naval Hospital, Mare Island, California; U. S. Naval Hospital, Puget Sound, Bremerton, Washington.

Information regarding physical requirements, etc., may be obtained by addressing a letter to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C. Applications must be completed and received in the Bureau of Medicine and Surgery prior to August 1, 1940, in order that authorization may reach the applicant in sufficient time for him to appear for examination on August 19, 1940.

University of California Medical School Offers Mail Library Service.—Establishment of a circulating periodical service for California physicians by the University of California Medical Center, was announced recently by Dr. Chauncey D. Leake, professor of pharmacology and librarian of the Medical School Library.

The University service replaces that previously provided by the State Medical Library. Volumes acquired by the State Library during the period of its operation, 1932-1939, are now on deposit at the University of California at Los Angeles and at the University of California Medical Center, San Francisco.

Rural physicians in California may now obtain books from the Medical Center Library and receive regularly any specialty journals in which they are interested. Service costs to meet mailing expenses are to be borne by the physicians, Doctor Leake said.

School of Nursing Established by State University.—A School of Nursing, replacing the present Training School for Nurses at the Medical Center in San Francisco, is announced by President Robert G. Sproul of the University of California. On July 1, all curricula in nursing and recommendations for degrees and certificates will be placed under the new school; the certificate in public health nursing is recommended by the department of hygiene.

The University, says President Sproul, for a long time has been endeavoring to raise the standards of preparation for nursing and to improve the quality of its instruction. At the close of the three-year course in the School of Nursing, the students will receive a Bachelor of Science degree and will be eligible to become registered nurses. In addition, there also will be offered curricula for graduate nurses leading to the Bachelor of Science degree and to Certificates in Public Health Nursing and Nursing Education.

Medical Center Won't Contract to Buy Bodies.—The University of California Medical Center will not enter into an agreement with any individual to purchase his body after death. This was announced by the Office of the Dean as a result of numerous offers reaching it in the past year. A spokesman for the Dean's Office said he knew of no reputable medical school or research institution in the United States which makes such contracts.

Although California law is not entirely clear on the subject, it is quite possible that a California citizen holds no property right in his body and, therefore, could not legally sell it, the statement said. Even if the law clearly allowed it, however, the Medical School would not enter into contracts to purchase bodies, nor will any other well-established research institution.

"We are deeply sympathetic with people whose dire financial difficulties make them contemplate this action," the Dean's Office announced. "But unfortunately it is not possible for us to help them in the way they desire."

The Pacific Coast Oto-Ophthalmological Society.—The twenty-eighth annual meeting of the Pacific Coast Oto-Ophthalmological Society was held Monday, June 24, to Thursday, June 27, inclusive, in Spokane, Washington, the Davenport Hotel being the headquarters. The guest speakers were Dr. F. K. Hansel of St. Louis, Dr. Walter B. Lancaster of Boston, and Dr. Meyer Weiner of St. Louis.

Highlights in California State Public Health Organization:

1850-1859:

Dr. Thomas M. Logan arrived in Sacramento to practice medicine. In 1856, together with Dr. E. S. Cooper, he issued call for organization of State Medical Society. Conducted correspondence with medical men and received reports of communicable diseases. As chairman of committee on medical topography of the American Medical Association (organized in 1856) wrote reports on such diseases. California Medical Society went into eclipse in 1860.

1860-1869:

Doctor Logan was practicing in Sacramento, writing on public health subjects for medical journals, active on Sacramento City Board of Health, of which he was secretary.

1870-1879:

State Board of Health established April 15, 1870, with Dr. Henry Gibbons, President, Dr. T. M. Logan, Secretary. Doctor Logan made president of the State Medical Society, reorganized in 1870.

In 1871, Logan, as chairman of committee of the American Medical Association on National Health Council, proposed a National Sanitary Bureau in Federal Government. A member of this committee was appointed from each state. Interest aroused in this proposal led directly to organization of American Public Health Association in 1873. Doctor Logan elected president of the American Medical Association in 1874.

Upon death of Doctor Logan in February, 1876, Dr. F. W. Hatch, Sr., appointed Secretary of State Board of Health.

1880-1889:

Doctor Hatch died in 1884, succeeded by Dr. Gerard G. Tyrrell, who was succeeded in 1891 by Dr. J. R. Laine.

1890-1899:

Doctor Laine succeeded in 1898 by Dr. W. P. Matthews. Rabies first appeared in California in 1899.

1900-1909:

Plague first appeared in United States in 1900, in San Francisco.

1902 Dr. N. K. Foster appointed secretary of the Board.

1905 Bureau of Vital Statistics established by law.

1905 Hygienic Laboratory established.

1907 Bureau of Foods and Drugs established.

1909 Mosquito and malaria surveys started and local control instituted.

1909 Doctor Foster resigned.

1910-1919:

1910 Dr. William F. Snow appointed secretary of the Board.

1911 State Tuberculosis Commission appointed, Dr. George H. Kress, Chairman.

1913 Morbidity reporting began on state-wide basis.

1913 Sanitary inspections by State inaugurated.

1915 Dr. W. A. Sawyer appointed secretary.

1915 Bureau of Tuberculosis established.

1915 Bureau of Sanitary Engineering established.

1917 Bureau of Venereal Diseases established.

1917 Dr. W. H. Kellogg appointed secretary.

1918 Influenza pandemic.

1919 Bureau of Child Hygiene established.

1919 Bubonic plague in Oakland.

1920-1929:

1920 Dr. W. M. Dickie appointed secretary.

1922 Bureau of Epidemiology established.

1922 Botulism from California commercially packed products.

1924-25 Plague in Los Angeles.

1925 Bureau of Cannery Inspection established.

1927 Crippled Child Act passed.

1929 State Department of Public Health established under reorganization of state government.

Tenth Meeting of the Biological Photographic Association.

—The tenth annual convention of the Biological Photographic Association will be held at the Hotel Schroeder, Milwaukee, Wisconsin, September 12, 13, and 14. This society is interested in the further study of photography as applied to the biologic sciences, and the improvement of its technique. Scientific photographers from all parts of the country will meet to exchange ideas and information on still and motion picture photography as well as the latest developments in color work.

The membership of the Biological Photographic Association is composed of professional clinical and biologic photographers as well as physicians, dentists, and scientists who are interested in this specialized branch of photography.

In view of the growing interest in medical and biologic photography the next annual meeting promises to be especially stimulating and successful. Anyone interested in this subject is welcome to attend the meetings and to submit prints for the salon.

Further information concerning the convention program, salon specifications, and membership in the society may be had by writing to the Secretary of the Biological Photographic Association, University Office, Magee Hospital, Pittsburgh, Pennsylvania.

Civil Service Commission to Fill Medical Officer Position.

—The United States Civil Service Commission has announced an open competitive examination to fill the position of chief of the medical division of the Civil Service Commission. Should vacancies occur in positions requiring similar qualifications in other Government agencies, they may also be filled from this examination. The salary of the position is \$6,500 a year, less a retirement deduction of 3½ per cent.

Because of the urgent need for filling the position, the examination will be open for a two-week period only. Applications must be filed with the Commission's Washington office not later than July 8 if received from states east of Colorado, and not later than July 11, 1940, if received from Colorado and states westward.

Applicants must have been graduated with an M.D. degree from a medical school of recognized standing; or must be licentiates of the National Board of Medical Examiners. In addition they must have had certain highly responsible professional experience in the field of medicine, partly in a managerial or supervisory capacity. Applicants obtaining the highest ratings may also be requested to appear for an oral examination.

Full information regarding the examination, and the application form, may be obtained from the Secretary, Board of United States Civil Service Examiners at any first- or second-class post office, or from the Civil Service Commission, Washington, D. C.

American Congress of Physical Therapy.—The nineteenth annual scientific and clinical session of the American Congress of Physical Therapy will be held on September 2 to 6, inclusive, at Hotel Statler, Cleveland, Ohio. This year there will be a departure from the usual arrangements in that the mornings will be devoted to an instructional seminar with the scientific program presented afternoons and evenings. This enables physicians to economize on time by attending both the instruction course and the annual convention during the same week. The entire instruction schedule is elective in character. Registrants may pursue only the individual courses they desire. The complete course consists of twelve lectures from a diversified list of forty-eight. The scientific program itself consists of papers, demonstrations, and motion pictures, covering every branch of physical therapy. There will be a separate scientific program, covering eye, ear, nose, and throat subjects. Write for schedule, fees, etc., to the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Illinois.

Film: "Choose to Live."—Officers of the Federal Security Agency and other governmental departments, and officials of District of Columbia governmental and voluntary health and welfare agencies were recently invited to preview a new documentary sound film, "Choose to Live," produced by the United States Public Health Service and the American Society for the Control of Cancer to aid in the campaign against cancer.

Preview screenings were held on Wednesday morning, April 17, in the auditorium of the United States Public Health Service, Nineteenth Street and Constitution Avenue, at 11:30 o'clock, and at Wilson Hall, National Institute of Health, Bethesda, Maryland, at 3:30 o'clock on Thursday afternoon, April 18.

Specially prepared for lay audiences, the picture tells the story of one woman's encounter with cancer and presents a background of educational information on the subject.

"Choose to Live" has been produced by skilled technicians. The actors in it are professionals, the laboratory and hospital scenes were taken with scrupulous attention to medical accuracy at Memorial Hospital, New York, Marine Hospital, Baltimore, and the National Cancer Institute, Bethesda, Maryland. The music score by members of the NBC symphony orchestra is an original arrangement by James C. Bradford. The musical background, the moving narrative, the human story, and the documentary pictures in hospitals and laboratories combine to give the picture unusual interest.

Press Clippings.—Some news items from the daily press on matters related to medical practice follow:

Medical Profession Plans to Push Fight

Determined Against Submitting to Federal Control of Medicine

New York, June 10 (AP).—American physicians today renewed their opposition to Federally controlled medicine and at the same time offered their complete cooperation to the government in the event of a war emergency.

In addresses before the house of delegates of the American Medical Association at the opening meeting of the annual convention the principal officers of the organization declared on one hand that the members were willing to devote their entire efforts to wartime service if necessary and on the other that they will not submit to peacetime control of private medical services.

Readiness Told

In a resolution presented before the opening meeting, the doctors declared in effect that "M" day—mobilization day for the armed forces—would also be "medical day" for the doctors of the country because they were already prepared to take care of the medical needs of both the Army and the civilian population.

Immediately after the resolution was introduced—approval was certain—Colonel George C. Dunham of Wash-

ington, assistant to the United States Army Surgeon-General, presented a resolution asking the cooperation of the association and its State and local societies in organizing a medical "column" prepared to heal the wounds and diseases of war.

Shortly before these actions, Dr. Arthur W. Booth, chairman of the board, reported that officials of the association, the District of Columbia Medical Society, the Harris County (Texas) Medical Society and the Washington (D. C.) Academy of Medicine would plead innocent before the District Court of the District of Columbia Friday to charges of conspiracy to violate the Sherman antitrust law.

At least five of the physicians present at today's meeting are under indictment in the case.

Dr. Nathan B. Van Etten of New York, incoming president, added the association "stands ready to cooperate to the limit of its ability in all measures of national defense."

Dangers Cited

He added, however, that while "love of country is a noble passion," it is necessary that medical men preserve "our patriotic ideals for the health and happiness of our people." It is necessary, even while engaged in a national emergency, to not "lose sight of the dangers to medical practice through concentrations of Federal authority" in regulating the practice of medicine.

Dr. Van Etten declared he approved the proposal of President Roosevelt to spend \$10,000,000 in the establishment of fifty small hospitals in needy areas throughout the country "where the need for them can be proved."

Need of Today

The need today, he said, is for "clean, warm places for the care of the acutely sick by competent personnel," workshops for adequately trained physicians and enough ambulances to carry chronically ill patients to large medical centers.—Los Angeles Times, June 10.

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Olson Ousts Dickie, Los Angeles Doctor Gets Job

After sixteen years' service as State Director of Public Health under five governors, Dr. Walter M. Dickie was ousted from the post yesterday by Governor Olson, who appointed Dr. Bertram P. Brown, Hollywood physician, to succeed him.

Some months ago the governor indicated that he intended to replace Dickie, whose reputation as a health officer is nationwide. This drew the fire of Dr. Howard Morrow of San Francisco, who declared that the California Medical Association strongly favored the retention of Doctor Dickie.

Doctor Brown came to this city in 1920 to establish practice. He is a native of Pennsylvania, where he was born in 1892.—Los Angeles Examiner, May 28.

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Doctor Bennett to Build Morale

Takes Over Post as General Hospital Director

Dr. Edwin S. Bennett, medical director for the last four and one-half years of the county's Olive View Tuberculosis Sanitarium at San Fernando, today took over his new job of superintendent of Los Angeles County General Hospital, declaring he was ready to assume immediately full responsibility for the institution's operation.

He said he was "convinced there is no basic trouble at General Hospital," the massive \$16,000,000 institution whose management has been the center of stormy controversy for many months.

To Build Morale

"The problem has been, as I see it," he said, "a lack of coordination and employee morale. I think that it can be corrected by giving the employees realization that someone will be there who is ready to take all responsibility for the hospital's administration."

"There will be mistakes, naturally, but I hope they will be few. I have no preconceived ideas on what my general administrative policy will be."

Doctor Bennett was appointed to the \$9,000-a-year post at the head of the largest acute disease hospital in the world by Rex Thomson, county superintendent of charities.

Doctor Bennett's new post recently was created by the Board of Supervisors to replace that of executive director, from which Everett J. Gray was retired by the board six months ago amid charges of "turmoil" at the institution and complaints about administration.—Los Angeles Evening Herald, June 6.

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Doctors Appointed to State Posts

Angelino and Monrovia Named to Health Board

Governor Olson yesterday appointed two to the State Board of Health, Dr. Francis Marion Pottenger of Monrovia and Dr. Elmer Belt of Los Angeles. . . .—Los Angeles Times, June 22.

New Health Set-up Sought for City of Los Angeles Reorganization of City Department to Include County Urged in Report

Reorganization of the City Health Department as a metropolitan health district to include Los Angeles and adjacent territory under a five-year plan looking to better service and efficiency is recommended as the result of an exhaustive survey for the Board of Health commissioners. A digest of the committee's findings released yesterday by Director Walter M. Dickie of the State Health Department added that the "ideal" solution of the matter would be to have such a metropolitan health district embrace all city and unincorporated territory in Los Angeles County.

Hampers Enforcement

"The question of territorial jurisdiction involves practically every public health activity in the metropolitan area and makes sanitation of foods and beverages, enforcement of effective quarantine and so on difficult of adequate supervision by any one of the present health agencies," the survey commented.

"Not only would more effective public health be secured under a metropolitan health district plan, but duplication of administrative overhead expense and duplication of considerable field work and expense would be eliminated at a substantial saving in such as present multiple expenditures."

Committee Proposal

The committee, headed by Dr. F. A. Carmella of the United States Public Health Service, recommends that such a district be set up with a central administration, a bureau of preventable diseases and a bureau of sanitation.

Under the director, who should receive from \$8,000 to \$10,000 a year, the committee set forth, there should be organized a section of accounting and one of personnel. And since Dr. George Parrish, present head of the City Health Department, will be retired in about two years for age and must be replaced, an assistant director should be appointed as soon as possible, the report set forth.

Program for Bureaus

The Bureau of Preventable Diseases should consist of eight sections: general statistics, control of acute communicable diseases, control of tuberculosis, control of venereal disease, industrial hygiene, maternal and child hygiene, public health nursing, public health laboratory, the committee urged.

The proposed Bureau of Sanitation would embrace a division of food sanitation, a division of environmental sanitation and miscellaneous services division.

Urge Budget Increase

Under the five-year plan the first step would be to increase the present city Health Department budget from the current \$700,000 at a rate of 20 to 25 per cent annually, or from \$140,000 to \$175,000, for five years.

"The second, third, fourth and fifth years should be devoted to giving effect to such detailed plans as will be developed and which will require considerable subordinate personnel, office and clinic facilities, equipment and so on."

"The reorganization plan also proposes the establishment for the present of at least eight district health centers. It contemplates that each of these health centers should, within its district, constitute a functional replica in limited degree of all the appropriate functions of the city Health Department itself."

Coordinator Urged

The work of the various health centers would be supervised and coordinated by the assistant director, the report added.

Dr. John C. Ruddock, president of the Board of Health Commissioners, and Doctor Parrish, city health officer, withheld comment until they have seen the report which they said had not arrived at their offices yesterday.

The Health Commission will conduct a regular meeting today, at which the survey report may or may not be discussed, Doctor Ruddock said.—Los Angeles Times, April 30.

Medical Post in SRA Filled

Appointment Goes to Dr. K. C. Gummess of Los Angeles

Appointment of Dr. K. Chester Gummess, Los Angeles physician, as medical director for the State Relief Administration, was announced yesterday by Walter Chambers, SRA Administrator.

Doctor Gummess succeeds Dr. A. E. Larsen, who recently resigned to accept the position of medical director for the Agricultural Workers Health and Medical Association.

He will take charge of the SRA medical program tomorrow, with offices at 155 W. Washington Boulevard.—Los Angeles Times, June 9.

Dr. F. B. Young Named on Board of Health

Sacramento, June 4 (UP).—Governor Olson appointed Dr. Frank B. Young, a surgeon of Long Beach, to succeed Dr. Roy Terry, also of Long Beach, as a member of the State Board of Public Health. Doctor Young will serve until January 15, 1944.—San Francisco Chronicle, June 5.

\$300,000 Health Service Building for U. C. L. A.

Designing of a \$300,000 Student Health Service building for the University of California at Los Angeles campus will begin immediately, it was announced today by Provost Earle Raymond Hedrick.

Allison and Allison have been appointed architects for the new building, which will be the twelfth on the campus. The same firm designed six of the present group.

The projected plan will provide a complete health service for students, exclusive of hospitalization, it was announced.

President Sproul recently outlined the need for an expanded health service, pointing out that at present the limited health service available to a student body of about 8,500 is crowded into inadequate quarters.

The health program will combine men's and women's services under one roof, increase the regular staff of attendants, expand the scope of services offered, and provide additional instruments and equipment, according to the plans.—Los Angeles Herald and Express, June 22.

Health Plan Scored

Dentists Against Insurance

Portland (Oregon), June 22 (INS).—The nation's 45,000 dentists are unalterably opposed to compulsory health insurance, Dr. Wilfred H. Robinson, Oakland, President-Elect of the American Dental Association, was on record today as advising delegates to the Oregon Dental Association convention.

He said the National Association approved setting up voluntary health insurance systems, however.—San Francisco Examiner, June 23.

New General Hospital Head Urges Advisory Board Revision

Recommendations that the Medical Advisory Board of Los Angeles County General Hospital be reduced from seventeen members to ten, each member serving one year instead of five, were filed yesterday with the Board of Supervisors by Dr. Edwin S. Bennett, newly appointed superintendent of the institution.

Doctor Bennett also is of the opinion that one of the members of the Advisory Board should be the Health Officer of the city of Los Angeles. At present only the County Health Officer serves.

He also asks the Supervisors to include the following as members:

Chairman of the hospital staff, who shall act as chairman of the Medical Advisory Board; chief of the medical service and chief of the surgical staff of General Hospital; dean of the School of Medicine, University of Southern California; president of the College of Medical Evangelists; president of the Los Angeles County Medical Association; secretary of the Los Angeles County Medical Association; chief of all curative clinics under the San Fernando Plan; Health Officer of Los Angeles County; Health Officer of the city of Los Angeles.

This would drop from the present personnel of the advisory board the executive superintendent and medical director of the hospital; assistant medical director; superintendent and medical director of the Rancho Los Amigos, executive superintendent and medical director of the Olive View Sanatorium.—Los Angeles Times, June 21.

Wilbur Hits Compulsory Health Plan

San Diego, May 12 (AP).—Dr. Lyman Wilbur, Stanford University president, assailed proposals for compulsory health insurance legislation by federal or state governments in a nationwide broadcast from Paradise Valley Sanitarium at nearby National City.

"We do not know enough about really workable methods," declared the former Secretary of the Interior in the Hoover Cabinet, "to crystallize into legislation regulations for providing health and medical care for everybody."—San Francisco Examiner, May 13.

Health Plan Extension Is Okehed by Physicians

Coronado, May 8 (AP).—The California Physicians' Service has approved a plan to extend its voluntary health insurance facilities to students of the sixty-three colleges and junior colleges in the State. The plan now goes to the House of Delegates of the California Medical Association, in convention here, for final sanction.

A request that the service be made available to individual members to permit farmers in agricultural sections of the State to join was rejected, a spokesman for the group reported.

Dr. C. Kelly Canelo, San Jose, and Manager Thomas J. O'Dwyer, Los Angeles, were re-elected C. P. S. trustees. The interim appointment to the board of Dr. Dewey Powell, Stockton, was approved.

The resignations of Dr. Lowell Goin, Los Angeles, and Dr. Earl Mitchell, Oakland, were accepted. Dr. Morton R. Gibbons Sr., San Francisco, was elected to the board, and the board's membership was increased from nine to eleven.

Dr. Edward H. Rynearson of the Mayo Clinic told delegates to the Association today that people who say, "I get fat even if I don't eat a thing," are taking liberties with the truth.

"The cold, hard fact is that the only source of fat is food," the Mayo physician said. "It is true that individuals are preordained to follow a certain type of bodily architecture. But even the fattest person can reduce safely if the amount of calories is properly restricted under supervision of a competent physician."

Doctor Rynearson said there was no "safe short cut" in reducing. "Much serious damage can be done by the indiscriminate following of 'fad' diets. Even greater damage results from attempts to lose weight from the unwise use of drugs and hormones."

Moderation in eating was urged by the physician, who said insurance statistics agreed that obese individuals die younger and are much more subject to disease than persons whose weight is normal.—*Modesto Bee and News-Herald*, May 8.

* * *

Remove Mystery Air, Urges L. A. Doctor

The medical profession in California would come out from behind the screen of mystery which hides it from the layman's view if a resolution proposed yesterday by Dr. Paul A. Quaintance, Los Angeles, is adopted.

Doctor Quaintance at the Coronado convention proposed that "the Association countenance submission by members for publication articles on medical topics written in language designed for instructing the people." He urged that county medical societies create public relations committees to review and approve such articles.

He pointed out that "adequately subsidized minorities are utilizing press and radio to spread propaganda tending to impair the confidence of the public in the medical profession and to foster demands for radical changes in the system of medical practice. Organized medicine, he said, has not utilized sufficiently the means available for public health education."—*San Diego Union*, May 8.

* * *

State Medical Group Sanctions "Hospital Care for All" Plans

Task Delegated to California Physicians' Service Through Its Health Insurance Program

Coronado, May 9 (AP).—A program designed ultimately to assure adequate medical and hospital care for everyone received the sanction of the California Medical Association, which adjourned its sixty-ninth annual meeting today.

The Association delegated the task to the California Physicians' Service through the latter's eight-months-old prepayment health insurance plan.

Heading the list of C. P. S. extensions authorized is a proposal to make the service available on a clinical basis to the estimated 350,000 persons dependent on state relief. The undertaking would require a legislative appropriation, and probably will be presented to the special legislative session next week.

Aid for Students

Also approved is a plan to extend the service to college and junior college students, subject to agreement by the county medical societies in which the institutions are located.

Indicating further liberalization of the plan, the Association named a committee to formulate plans to effect a downward rate revision to make the health and hospital service to the low-income group receiving \$100 or less a month.

The plan, now subscribed to by 12,000 persons, is available to groups of five or more having annual individual incomes of not more than \$3,000. Alson Kilgore, San Francisco, C. P. S. secretary, urging the revision, said the \$2.50-a-month charge is prohibitive to the low-income group.

Proposal Tabled

Pending further growth of the C. P. S., the Association tabled a proposal to extend the service to individuals, a suggestion offered to permit participation particularly by farmers in the San Joaquin Valley and other agricultural sections.

Although the drive against any compulsory medical plan will be waged chiefly through the C. P. S., the Association authorized action through other avenues to bolster the profession's hold on the management of the economic factors of medicine.

The Association referred to its Council for study a resolution of John H. Shephard, San Jose, to provide a comprehensive subsidization for any patient who chooses to go to a private hospital. . . .—*Los Angeles Times*, May 10.

* * *

Fight on "Political" Medical Service Urged

Coronado, May 6 (AP).—Dr. W. H. Bueermann of Portland, Ore., urged the medical profession itself to answer demands of "pressure groups" for "politicalized medicine" which he said would be administered by an "unsympathetic and nonmedical bureaucracy."

Speaking before the opening convention session of the California Medical Association, the Portland physician gave an account of seven years of operation of the Multnomah Medical Service Bureau of Portland, which he heads.

Doctor Bueermann said there had been increasing evidence the last ten years that provision should be made for medical care of low-wage industrial workers on a voluntary payment basis.

"The medical profession has decreed that the solution must be met through its own leadership, and that the medical care of the worker can best be solved by developing feasible plans of voluntary health insurance which meet the existing needs."

Doctor Bueermann's address brought out the similarity of conduct of the Portland bureau with the California Physicians' Service, which was organized last year for persons in low income brackets. The maximum limit for patient membership in Portland is \$1,800, differing from the California set-up in which the upper limit is \$3,000.

During its operation, Doctor Bueermann said, the bureau had received annual income increases from \$4,157 in 1933 to an estimated \$333,227 in 1940. Fees to physicians for the same period range from \$146,000 to \$185,000, the latter estimated for this year.—*Long Beach Press-Telegram*, May 6.

(Press Clippings are Continued on Page 41)

LETTERS

Subject: Guest Speaker Rynearson's Opinion of the Coronado Annual Session.

(COPY)

MAYO CLINIC

Rochester, Minnesota,
May 27, 1940.

Dr. George H. Kress
Secretary, California Medical Association
450 Sutter, San Francisco, California

Dear Doctor Kress:

. . . I just want to send you this personal note to congratulate you, as the secretary, for the splendid job which you did. I have attended quite a few state meetings and I have never in my life seen anything to compare with the splendid arrangements which you had perfected at Coronado.

Mrs. Rynearson joins me in thanking you for your many acts of kindness.

Very truly yours,

E. H. RYNEARSON, M. D.

Subject: Reaction of the Public to the Graduating Class of the University of Southern California Medical School.

(COPY)

Los Angeles, June 13, 1940.

Dear Doctor Kress:

At the Commencement Exercises of the University of Southern California in Los Angeles, there was a surprising occurrence in which I thought you might have an interest.

They were introducing, by groups, the candidates for degrees. The arrival of the President of the University of Southern California and his party received the appropriate handclapping. The introduction of those for honorary degrees received similar recognition. The doctors of philosophy received the same. When the Dean of the Medical School asked that the candidates for the Degree of Medicine rise, there was a spontaneous roar of applause that was almost startling. With probably about fifteen thousand spectators in the stadium, it was as though a famous athlete was about to enter the game or as though a close game had just been decided by a touchdown. The applause was so remarkable that even the members of the class turned to see what had happened. As a member of the audience, I thought for a moment something that I had not seen was going on. The young graduates, in a talk with them after the exercises were over, were quite astounded by the ovation.

I have no explanation for this other than the thought that the public at this time of war stress is more appreciative of such types of trained men. Maybe there has been a distinct turn in the trend of public opinion in our community. Would it not be interesting to learn whether similar such phenomena occurred in other similar exercises in this State. It was so in contrast to other such occasions which I have attended here that I thought it worthy of bringing it to your attention.

Fraternally yours,
H. W. SPIERS, M. D.

✓ ✓ ✓

(COPY)

UNIVERSITY OF CALIFORNIA
Medical School, The Medical Center
June 20, 1940.

To the Editor:—Thanks a lot for your note of June 17, giving me the opportunity to read Doctor Spiers' letter of June 13 regarding the applause at the Commencement Exercises of the University of Southern California when the medical graduates came forward to receive their degrees. For several years we have noted the tendency toward the same sort of enthusiastic response at the University of California Commencement Exercises in Berkeley. I think it reflects a bit the appreciation of the public of the physicians' unselfish devotion to human welfare and the ideals of the medical profession in holding human welfare above the more personal selfish interests of the doctor himself. . . .

Faithfully yours,
CHAUNCEY D. LEAKE.

Subject: A Proposed "Non-Medical Practice" Act for California.

(COPY)

STATE OF CALIFORNIA
DEPARTMENT OF
PROFESSIONAL AND VOCATIONAL STANDARDS
BOARD OF MEDICAL EXAMINERS
San Francisco, California,
June 18, 1940.

Re: Non-Medical Practice Act

To the Editor:—We were recently informed that Dr. J. Theo. Hollie, Chairman of the California Natural Healing Arts Association, 638 West Fortieth Place, Los Angeles, had requested the Attorney-General to prepare a title for an amended draft of a proposed initiative measure, designated "Non-Medical Practice Act."

The title as submitted by the Attorney-General is as follows:

"Non-Medical Healing Arts. Initiative. Creates Board of Non-Medical Examiners with jurisdiction over prac-

tioners of, and schools teaching, massage, physiotherapy, herbology, naturopathy, minor surgery, and obstetrics as defined in Act. Prescribes Board's qualifications, powers, duties, and compensation. Exempts employees from civil service. Requires examination of applicants; prescribes educational and other qualifications of licentiates, grounds for issuance and revocation of licenses. Accords licentiates all rights and privileges granted physicians, without discrimination, including access to all institutions supported by public funds. Requires State officials accept reports and certificates filed by licentiates. Defines unlawful practice, specifying penalties and disposition of moneys received from violations."

The Attorney-General is reported to have advised that the circulation title and summary prepared for a similar measure on December 14, 1939, is to be disregarded.

The above for whatever interest may be attached.

Very truly yours,
C. B. PINKHAM, M. D.,
Secretary-Treasurer.

Subject: Medical Defense Brochure of the California Medical Association.

(COPY)

SALMONS AND WOLCOTT Co.*
San Diego, California,
June 14, 1940.

Dr. George H. Kress
Secretary, California Medical Association
450 Sutter Street
San Francisco, California
Dear Doctor Kress:

We thank you very much for the three copies of the Medical Defense Brochure. We think it is wonderful, and we enclose a copy of the letter we are sending Dr. F. E. Toomey, Secretary of the Medical Advisory Committee of the San Diego County Medical Society, concerning same.

You may be interested in reading some of the letters that we have sent out to the San Diego County Medical Society members from time to time, as they bring out some of the same thoughts.

Several years ago we gave the information here regarding the so-called New Haven Plan, and since then we have continued to do whatever we could on preventive work. We are glad to report that we are securing better cooperation and results.

San Diego Trust and Savings Building.
Very truly yours,
SALMONS AND WOLCOTT Co.
(Signed) Paul Wolcott.

✓ ✓ ✓

(COPY)

June 14, 1940.

Re: Malpractice Insurance

Dear Doctor Toomey:

We have just been privileged to read the Brochure on Medical Defense compiled by the Committee on Public Relations of the California Medical Association.

If all of your members have not yet received their copies, we assume they will shortly, and our thought in writing you is for you through the Bulletin, or whatever means possible, to impress upon your members the importance of most carefully reading this Brochure. It is marvelous, in our opinion, and most instructive, and should be re-read from time to time. It seems to us to be most beneficial for all members to make it a practice to read this every month.

Very truly yours,
SALMONS AND WOLCOTT Co.

* This firm has been handling the blanket medical defense coverage for the San Diego County Medical Society.

Subject: Equipment for Medical Personnel of Armed Forces of the United States.

San Francisco, June 18, 1940.

To the Editor:—When we finally go to war with those who oppose our way of living, medical units may find themselves wholly unprepared for modern warfare. Members of the medical profession who are interested in preparedness might find it wise to study Allied attempts at first-aid in Flanders and France. The fact is there simply hasn't been any possible. Unless hospital units are armored and mechanized along with other combat units, they will not be able to exist in modern warfare. It is no longer appropriate to leave these matters to the philanthropy of well-intentioned spinsters who like to give ambulances to the Red Cross. Modern military first-aid and hospital units must be fully armored and mechanized. This can only be accomplished through adequate national appropriations in connection with the streamlining of our armed forces. It would be wise for the medical profession to make sure that such provision for the Army Medical Corps is made.

CHAUNCEY D. LEAKE.

Subject: Personnel of United States Marine Corps.
(COPY)

UNITED STATES MARINE CORPS
HEADQUARTERS RECRUITING DISTRICT OF DETROIT
Detroit, Michigan,
June 3, 1940.

Dear Doctor:

The United States Marine Corps has been authorized by the Congress to increase its personnel by nine thousand men.

It will be the policy of this Recruiting District to fill its quota as rapidly as possible.

The enclosed blanks state the physical qualifications required of applicants for enlistment.

A high mental and physical standard of recruits has always obtained in the Marine Corps in the past, and it is planned to maintain that high standard during the present campaign.

The writer feels that a physician is ideally qualified, as a judge of human nature, as an expert in physical examination, and as an outstanding citizen in his community to select the type of man best fitted for the Marine Corps.

This is a time when all Americans feel that it is wise and urgent to put their shoulders to the wheel and aid the move for preparedness.

The writer earnestly solicits your aid in completing the important task, common to us all, of filling our armed ranks to their authorized limits with the finest men in America.

250 New Federal Building.

Very truly yours,

JOSEPH E. MALCOMSON,
Lieutenant-Commander, Marine Corps,
United States Navy.

Subject: Intravenous Drip Method for Treatment of Syphilis.

(COPY)

THE AMERICAN SOCIAL HYGIENE ASSOCIATION, INC.
New York, N. Y.

To the Editor:—The American Social Hygiene Association is interested in getting the following information to the medical profession and asks your cooperation in publishing this statement:

In order that there may be a central source of information with regard to studies of the intravenous drip method for treatment of syphilis ("the five-day treatment"), the American Social Hygiene Association at 50

West Fiftieth Street, New York, has been asked to gather and to keep available information regarding this subject. The Association requests all physicians and hospitals which are planning or are now carrying on studies of experiments with this method of treatment of syphilis to send brief information regarding the following points to the Association at the above address:

1. Name of hospital or other institution.
2. Name of principal physician in charge of the intravenous drip study.
3. Type of case or cases of syphilis treated by the intravenous drip method.
4. Name of drug or drugs used.
 - (a) By the intravenous drip method.
 - (b) By any other method before, during or after intravenous drip therapy. (Mention any specific therapy used.)
5. Routine laboratory work done on cases of syphilis treated by the intravenous drip method.
6. Usual number of hours of intravenous drip treatment per day per patient.
7. Usual number of days of intravenous drip treatment per patient.
8. Any other pertinent facts.

The Association will be glad, so far as possible, to answer inquiries regarding the intravenous drip treatment of syphilis. The Association has available to physicians, upon request, a brief pamphlet on the subject of the present status of the intravenous drip method of treatment of syphilis, written by Dr. Charles Walter Clarke, Executive Director of the Association and a member of the New York City Committee on the Intravenous Drip Treatment of Syphilis.

1 1 1

FIVE-DAY TREATMENT FOR SYPHILIS

The above headline, from page 1 of the *New York Times* of April 13, was typical of New York City newspapers and other important journals throughout the country on that date. Almost without exception, front-page space, with striking headlines and several columns of text, was devoted to a report presented before a meeting of two hundred distinguished physicians on April 12 at Mount Sinai Hospital, New York, when the preliminary results of a new treatment method for syphilis were discussed. This new method may well be the most important advance in syphilis therapy since Ehrlich discovered salvarsan in 1910.

Developed by Dr. H. T. Hyman, Dr. Louis Chargin, and Dr. William Leifer, all of New York City, the method consists essentially in introducing very slowly into a vein an arsenical compound in high dilution of saline and glucose. The solution flows at the rate of twenty or thirty drops per minute for ten or twelve hours a day for a period of five days. The quantity of the arsenical which can safely be given in five days by this method is equivalent to the amount given in a period of three or four months by present standard methods.

About three hundred patients have now received this treatment with results which so far appear to be excellent. Infectious lesions have healed quickly and blood tests have become negative in a high percentage of cases. It should be understood, however, that experience with the five-day method is limited as yet to a single class of cases—early syphilis in men. It is not known whether the method can be applied to latent or late syphilis, or to syphilis in women (whether or not pregnant) or to congenital syphilis in infants and children. Experiment with such types of cases of course will be necessary. A good deal of time must necessarily elapse before the new treatment can be evaluated and before it can be available generally, should it prove satisfactory. Meantime standard methods of treatment are reliable and available almost everywhere.

Dr. Walter Clarke, American Social Hygiene Association Executive Director, and a member of the committee which supervised the treatment project at Mount Sinai Hospital, has prepared a statement which appears in the *May Journal of Social Hygiene* and to which *Social Hygiene News* readers are referred for further particulars. Address The American Social Hygiene Association, Inc., 50 West Fiftieth Street, New York, N. Y.

Ask for Publication A-272, *The Five-Day Treatment for Syphilis—A brief popular exposition of the method and its present limitations*, 5 cents.

50 West Fiftieth Street.

Subject: Governmental Publications on Venereal Disease.

(COPY)

FEDERAL SECURITY AGENCY
UNITED STATES PUBLIC HEALTH SERVICE
WASHINGTON

To the Editor:—*Venereal Disease Information* presents a monthly digest of the important papers on diagnosis, treatment, pathology, laboratory research, and public health from the entire world. In addition, it publishes important special papers and reports by leading scientists. It is designed to keep both the specialist and the general practitioner informed of developments in the field of syphilology and urology.

This medical journal of venereal disease has been highly recommended by leaders in all fields of public health. In a rapidly developing and changing field of medicine, the physician interested in venereal disease control from the standpoint of differential diagnosis and treatment will find *Venereal Disease Information* an important aid.

Venereal Disease Information is published monthly by the United States Public Health Service. Today it ranks as the Government's "best seller," with the highest paid circulation of any federal publication. It is available at 50 cents per year to all physicians.

New subscribers to *Venereal Disease Information* may receive, on request, any or all of the following supplements:

- No. 5—"Diagnosis of Syphilis by the General Practitioner" (1938)
- No. 6—"Management of Syphilis in General Practice" (1938)
- No. 7—"Syphilis in Mother and Child" (1940)
- No. 8—"The Gonococcus and Gonococcal Infections" (1939)
- No. 9—"The Serodiagnosis of Syphilis, Part II, Revised Technics" (1939)
- No. 10—"Control of the Venereal Diseases in the United States: Present and Future Plans" (1939)

All orders should be directed to the Superintendent of Documents, Government Printing Office, Washington, D. C. Subscription fee, 50 cents per year, in check or money order, *not stamps*.

Subject: Brochures on Gonorrhea and Syphilis.

(COPY)

FEDERAL SECURITY AGENCY
U. S. PUBLIC HEALTH SERVICE
WASHINGTON

To the Editor:—Since the publication in September, 1939, of the first folder on gonorrhea in the present anti-syphilis disease campaign, it has become evident that, while many people still consider gonorrhea as "no worse than a bad cold," there is growing a wide interest in gonorrhea control.

Testimony to this fact lies in the distribution report on the new Public Health Service folder, "Gonorrhea the Crippler." It was released in September as the fourth folder in the "dollar-a-hundred" series,* and already more than 400,000 copies have been sold.

It is evident, however, that more complete information than can be encompassed in a folder is needed, and to assist those who are called upon to present to the public facts

about gonorrhea as a medical and as a public health problem, a booklet, "Twenty Questions on Gonorrhea," has been prepared.

"Twenty Questions on Gonorrhea" was developed with the active assistance of officers and members of the Neisserian Medical Society. It is written in layman's language for his use, and for the use of the physician who wants to know how to tell the story of gonorrhea in nontechnical terms. Every doctor should have a copy in his library for reference when he is asked to discuss gonorrhea control before lay audiences. And as a service to his patients every doctor should have a supply on his desk.

This new question-and-answer booklet, illustrated and with schematic anatomical drawings, is available from the Superintendent of Documents, Washington, D. C., for five cents a single copy, and with a 25 per cent reduction on orders of one hundred or more.

Sincerely yours,

R. A. VONDERLEHR,
Assistant Surgeon-General, Division
of Venereal Diseases.

MEDICAL JURISPRUDENCE†

By HARTLEY F. PEART, ESQ.
San Francisco

What May a Physician Expect of His Patient?

Nearly all of the articles written not only by the author, but by others, on the subject of medical jurisprudence deal with the responsibilities of a physician to his patient and the various phases of liability which may arise from failure to live up to all of them. For the purpose of throwing a little sunshine into the picture, this article will be devoted to an exposition of some of the duties which a patient owes to his physician.

In *Becker vs. Janinski*, 27 Abb. N. Carolina 45, a full statement of the patient's responsibility was set forth as follows:

All the obligation is not upon the physician, but the patient also has his duties to discharge. In particular, the patient must obey the orders and follow the directions of his physician, and if he disobeys such orders or neglects such directions, he cannot hold the physician for the consequences of such disobedience or neglect. Accordingly, I charge you that if you find that the injury of which the plaintiff complains was the effect of her carelessness or neglect alone or was the effect of the defendant's negligence or want of skill in combination and cooperation with her own carelessness and neglect she cannot recover. Her contributory negligence would defeat the action.

Most of the instances where objection is made to the conduct of the patient arise out of a failure on the patient's part to follow instructions. However, a patient not only has an obligation to follow reasonable instructions, but he is required continually to exercise such ordinary prudence as would be expected of a person in his position, and a failure on his part to exercise such prudence will prevent recovery.

In reference to the duty of a patient to follow instructions, various situations may arise.

Refusal to Submit to Treatment. A patient is bound to submit to the treatment prescribed by his physician or surgeon if it is such as a physician of ordinary skill would sanction, and a physician or surgeon who is prevented from

* No. 1, "Syphilis—Its Cause, Its Spread, Its Cure"; No. 2, "Syphilis and Your Town"; No. 3, "You Can End This Sorrow"; No. 5, "Gonorrhea the Crippler."

† Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE, presenting copy submitted by Hartley F. Peart, Esq., will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

correcting an ailment by the refusal of the patient to submit to the proper treatment cannot be held liable for resulting damages. Where the patient is incompetent to speak for himself, and the members of his family refuse to permit an operation or other proper treatment, the physician is relieved from liability for the course pursued or other injuries resulting from failure to apply the treatment.

Failure to Return for Treatment. A patient who, after receiving treatment, fails to return to have the entire course of treatment completed, is guilty of contributory negligence. In other words, his own act has contributed to his injury. However, it should be stated that if the patient's failure to return is a result of his discovery that his condition is not improving because of the physician's negligent treatment, the patient may go to another physician for proper treatment and still hold the first liable for such injuries as had occurred prior to the change.

Generally speaking, negligence of the patient will bar any action based upon the negligence of the physician on the theory that the negligence of the patient supervenes that of the physician. However, it has been held that if both the physician and the patient have been negligent and the injuries due to the respective negligence of each can be separated, the physician is liable for the injuries due to his own want of skill or care. It has further been held that where the liability for negligence on the part of the physician has already been incurred, subsequent negligence of the patient which merely aggravates the injury does not discharge the physician from liability for such damage as would have occurred regardless of the patient's act.

Some cases have held that a physician may not be held liable for injuries resulting from an operation performed at the insistence of the patient despite the physician's advice that it is unnecessary and improper. Thus, it has been held that where the patient did not consult his surgeon as to the propriety of bleeding him, but only required the performance of the manual operation, there was no liability. However, a physician should always be wary of patients who have definite convictions as to what form of treatment they want. When actually faced with injury, such a person may state that the treatment itself was negligently performed or even take the position that he did not really give any directions, but that the act was done upon the suggestion of the physician and acquiesced in by the patient because of his reliance on the physician's superior knowledge. It is suggested that whenever a physician is asked to perform an act which is against the physician's best judgment, the patient should be sent elsewhere. At least a physician should obtain a written statement from the patient to the effect that he is receiving the treatment against the physician's advice.

Finally, there are instances in which a physician secures from a patient a writing in which an attempt is made to have the patient assume all risk. It must be remembered that even though such a writing is obtained and may have the effect of eliminating liability in so far as the choice of the method of treatment is concerned, nevertheless, a liability for negligent performance of the treatment will remain. A physician cannot eliminate by contract liability for his negligence. Thus, it has been held that where a patient was warned that danger attended the use of x-rays and the patient agreed to assume the risk, such assumption would not be deemed to cover the operator's negligence.

Generally, it may be said that the rules of contributory negligence are mere expositions of a rule of fairness. However, occasions may arise in which an act that appears fair and reasonable to the physician may not appear as such to a court or jury. For that reason, a physician should always keep in mind the general directions of the law in reference to the conduct which may be expected of the patient.

ENDOCRINOLOGY: A CRITICAL ANALYSIS*

By EDWARD H. RYNEARSON, M. D.

Rochester, Minnesota

Suggested Reading

THE PITUITARY

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* This paper is in two parts: Part I appeared in the June issue of CALIFORNIA AND WESTERN MEDICINE (page 257); Part II appears in current issue (page 12).

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. XIII, No. 7, July, 1915

From Some Editorial Notes:

Surgeon-General Rupert Blue, President-Elect of the American Medical Association.—It is an unusually keen pleasure to announce not alone that General Blue was elected President of the A. M. A., but that the election to that office occurred in San Francisco; and furthermore, that it was an expression of a spontaneous desire to have him at the head of the Association, and not in any way a matter of "medical politics." No more appropriate thing could have happened than for the office to come to him in the city for which he did so much; in the city in which his great idea was born, the idea that alone would mark any man as great—the idea accepted by the world as the ultimate solution of the problem of bubonic plague—building out the rats. The biggest part of Doctor Blue's work in California is not a part of the record; it will never go into official reports or be a part of any government document, but it showed him to be a master diplomat as well as a public health genius, and endeared him to the people of California and of San Francisco. His biggest problem in dealing with the plague situation in San Francisco was to harmonize the many warring elements and bring many men who were unfriendly to each other, into a state of mind wherein they would work for the common cause; and this he did so quietly, so perfectly and so thoroughly, that few people realized what was going on. . . .

The registered attendance at the San Francisco session was about 2,300.

Physician's Rights.—Many questions are propounded to the Secretary in regard to the rights and duties of physicians and their relations to the public and to their patients. It is singular but nonetheless true, that not alone the lay public generally, but many physicians, seem to think that they are more or less in the nature of "public carriers"; innkeepers, etc.; that they must respond to a call or must treat a sick person if sent for to do so. This is not at all the case. Quite the contrary. Nor is this definite statement merely a matter of opinion as these points have been settled in court and the decision sustained. It does not matter whether the person sending for a physician is or is not able to pay him a proper compensation; nor does it matter what the circumstances are, the urgency of the call, inability to get another physician, etc. The courts have ruled in one case at least, that even when money was tendered, no other physician could be reached in time and the patient died as the result of a physician's flat refusal, without stated reason, to visit and treat or prescribe for this sick person, the physician was in no way liable and the suit against him was dismissed. Any physician may elect whether or not he will undertake to exercise his professional ability and accept the offered employment in any given case. No one and no law compel him to extend his professional services, either with or without compensation, unless he wishes to do so.

Patient's Rights.—A physician having accepted a call to attend a sick or injured person is, however, a different case. His acceptance of the call and his treating the patient are taken by the courts to mean the undertaking of an implied contract based on ordinary reason and common justice. The physician, by accepting the call, indicates that

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† This column strives to mirror the work and aims of colleagues who bore the brunt of Association activities some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

News

"Dr. Lucius R. Wilson, superintendent of the John Seely Hospital in Galveston, yesterday was top man in the scramble for the post of director of the county's General Hospital. A rating of 105.16 put Doctor Wilson at the top of the list of four men certified for the post by the Civil Service Commission. . . . The other doctors certified by the Commission were Dr. Edwin S. Bennett, medical director at Olive View Sanitarium; Dr. Isidor H. Sheffer, medical superintendent of the Metropolitan Hospital, New York City, and Dr. Francis J. Bean, assistant superintendent of the University of Nebraska College of Medicine. Doctor Wilson and Doctor Bennett benefited by a 10 per cent addition to their grades because of the Civil Service ruling giving to former service men the differential in the rankings. . . . Twenty-one doctors originally showed interest in the position but only seven took the test." (Los Angeles News, May 10, 1940.)

"In an effort to reduce the death toll from drugs heretofore purchased without restrictions, the State Board of Pharmacy yesterday adopted a resolution prohibiting the sale of dangerous sleeping potions unless prescribed by physicians. Since January 1, according to John A. Foley, secretary of the Board, there have been twenty-three deaths in Los Angeles and vicinity and seven in the San Francisco area, either through suicide or accident, as a result of promiscuous purchase of the deadly drugs. Drugs specifically listed by the Board include veronal, barbital, barbituric acid and several others. These hereafter may be sold at retail only on the written order or prescription of a physician and surgeon, osteopathic physician and surgeon, dentist or veterinary surgeon duly licensed to practice in California. . . ." (Los Angeles Times, May 17, 1940.)

Under date of May 25, 1940, the California State Board of Public Health "adopted under Section 205, Paragraph D, of Article 1, of the Health and Safety Code," a resolution naming veronal, barbital, acid diethylbarbituric, barbituric acid, or any of their salts, derivatives or compounds, phenobarbital, or any of its salts or compounds, acetylurea, sulfonated methanes, or any of their salts, derivatives or compounds, phenylhydantoin, or any of its salts, derivatives or compounds, as dangerously poisonous drugs, chemicals and medicinal substances, permitting their sale only by written order or on "prescription of a physician and surgeon, osteopathic physician and surgeon, dentist or veterinary surgeon, duly licensed to practice in the State of California," with a further order that such prescriptions "shall not be refilled without the written order of the prescriber."

"Thirty-seven druggists in Sacramento pledged themselves not to sell medicines for venereal diseases without a physician's prescription. . . . This was announced today by Glenn E. Coolidge, public relations officer of the department (of public health), who said persons who ask for medicines or advice for treatment will be referred to their family physicians or to the municipal clinic at Fifth and "I" streets. Druggists coöperating in the campaign are furnished with certificates for display in their stores. . . . The move to stamp out self-treatment of venereal diseases

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† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.